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# 1992 SCIENCE OLYMPIAD NATIONAL TOURNAMENT

## FINAL REPORT

SUBMITTED TO

### NASA

SUBMITTED FOR

## AUBURN UNIVERSITY COLLEGE OF SCIENCES AND MATHEMATICS

SUBMITTED BY

W. D. PERRY AND MARLLIN L. SIMON  
NATIONAL TOURNAMENT COORDINATORS

ON THIS DATE

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## Overview

In the fall of 1991, approximately 8000 Junior and Senior High Schools from 39 states in the country registered one or more teams with the National Science Olympiad Headquarters, and started working their way towards the Science Olympiad National Tournament, which was held at Auburn University, Alabama on May 15 and 16, 1992.

Teams that made it to the Science Olympiad National Tournament had to compete at the regional (e.g. Alabama had five regional tournaments) and state levels. In most cases a team had to be number one in the state competition in order to make it into the National Tournament. Since the decision was made to invite 50 teams from each division (division B is Junior High and division C is Senior High), for each state that did not participate, another state could send two teams. The selection of states that could send a second team was based on statewide registration with the National Headquarters.

Appendix A consists of a list of all teams (by division) that participated in the 1992 Science Olympiad National Tournament.

## Pre-Olympiad Mail Campaign

The pre-Olympiad mail campaign was designed in such a manner as to not only supply the participating teams with the information needed to function at the National Tournament but also to create some excitement and anticipation about coming to Alabama and Auburn University. The package sent to each team included among other things information about travel, maps, housing, meal plans, pre-Olympiad activities at NASA and the US Space and Rocket Center, on campus activities, teacher workshops, registration, opening ceremony, awards ceremony, socials, special meetings for coaches and most importantly a schedule of the competitive events. In order to help peak their excitement about the National Tournament we created and sent to each participating team several copies of an attractive trifold brochure and a Science Olympiad / Auburn University poster. Appendix B consists of the contents of the information package mailed and Appendix C is a copy of the brochure. Due to size constraints, the poster is not included.

## Pre-Olympiad Events In Huntsville

Our initial thinking was that we should try to find some type of significant tourist attraction for teams to visit as they entered the state from either the North, East or West. The obvious selection from the North was the U. S. Space and Rocket Center in Huntsville. After we approached the Space and Rocket Center, it became obvious that with the help of NASA, they were planning such a significant event that we decided that we should not do anything else which might detract from it, and should instead do everything possible to funnel as many of the teams as possible in through Huntsville. NASA and the U. S. Space and Rocket Center planned a fantastic day (Thursday May 14, 1992). About one fourth of the participants attended this event. The day was deemed a major success by all concerned, including NASA, U. S. Space and Rocket Center, AU and, most importantly, the science students and teachers.

The Huntsville activities set a good tone for the Olympiad and will be remembered for a lifetime by all who were able to participate. A copy of the blurb announcing the Huntsville Experience is shown in Appendix D.



## **Registration**

Registration for the Olympiad was held in the Auburn University Hotel and Conference Center. At this time we made it very evident that we had every intention of being a good host. Among other things, all participating students received a commemorative designer Science Olympiad tee shirt and souvenir Science Olympiad badges. Appendix E contains one of the souvenir badges and Appendix F shows the contents of the registration package.

## **One-Day-Early Events On Campus**

The opening ceremony for the Olympiad is traditionally on Friday, the eve of the competition. Consequently, many coaches bring their teams to the host campus one day early so they may become familiar with the campus and locate the site of their respective events. Since this trend existed, we decided to take advantage of this opportunity to showcase the University and its programs to the Nation. The various Colleges and Schools of the University responded magnificently to this challenge by creating a number of on campus activities. Appendix G contains a list of these activities along with a brief description of each. Appendix H shows a Master Schedule of Olympiad Activities. It should be added that numerous NASA displays in the Student Union made a significant contribution to the One-Day-Early events. In addition to these displays, NASA conducted a number of workshops for teachers using both the LASER Van, and the LUNAR Samples Program. Appendix I consists of information about these events.

## **NASA Special Event**

As a way of commemorating the fact that 1992 is an International Year of Space and also recognizing the major contribution of NASA to the Science Olympiad National Tournament, a special event was created. This event, Mission To Planet Earth, was created and implemented for NASA by John Katsenberger and Jessie Boyce of The Aspen Institute for Global Change. Background information and a description of this event is shown in Appendix J. Special awards were given by NASA and scholarships to Space Camp were given by the U. S. Space and Rocket Center to the winning teams and their teachers.

## **Opening Ceremony**

Appendix K shows the program for the opening ceremony. As may be seen from the Dais listing, the space industry was well represented and Mr. J. A. Bethay, Associate Director, Marshall Space Flight Center, gave a special welcome to the participants.

Notable features of the ceremony were the Roll Call of the states with representatives of each team presenting their school flag while an outline of their state and school name appeared in LASER Light on a 40 by 60 ft screen; a special recognition of all teacher coaches with a nice plaque and a LASER Light Show by Stone Mountain Lasers. There is no doubt in our minds that the opening ceremony created lifelong memories for all who were present. The LASER Light show was dynamic, entertaining, exciting, moving and patriotic.



## The Competition

The competition amounted to 23 events in each division. In order to have a well run tournament and maintain consistency with previous years, the host institution supplied an event supervisor for each event and where possible the National Organization brought in an event supervisor for each event. The persons supplied by the host institution all had previous Olympiad experience at regional and state level competitions. The persons supplied by the National Organization had all worked their event at several past National Tournaments and in some cases were the creators of the event. These two event supervisors functioned as a team to plan and implement their particular event. On the day of the Olympiad they were assisted by other faculty, staff, students and numerous science teachers from throughout the state of Alabama. Appendix L lists the event supervisors and Appendix M shows the schedule of events. On the day of the Olympiad over 350 persons contributed their time and effort towards the success of this National Tournament. All 23 events in each division were run without a major problem.

## Awards Ceremony

Appendix N shows the Program for the awards ceremony. For each event, medals were awarded through the sixth place. In addition, overall trophies were given for the top six overall winners and plaques of recognition through the tenth place. Appendix O shows a breakdown of all events and how the participating teams scored. In addition to event medals, all participants received a nice certificate of participation (see Appendix P for a sample) and a commemorative gold plated designer lapel pin.

## Follow-up

After the Olympiad we sent each school a nice letter and a copy of the event statistics. We also corresponded with the Governors office of each state with some complementary statements about their states team(s) (see Appendix Q).

## Media

The Auburn University Office of Public Relations assisted us with the media. With their help we sent a News Release to the press in the area of each participating school. The day of the Olympiad we had three film crews working the campus. This effort was focused on producing three thirty minute satellite uplinks. Information about this uplink was sent to every participating school and television stations in their area. It is our impression that in many cases the parents of students "bugged" the area TV stations until they agreed to downlink these segments and show them for the benefit of the proud parents and students that were at home and anxious to see how their team was doing.



## **Feedback**

Feedback regarding the Olympiad was overwhelmingly positive with many of the teachers and the National Officers claiming that this was the best Olympiad to date. Appendix R contains a brief note from the head coach of the La Jolla High School, La Jolla, CA. This team won the overall first place award in Division C.

We feel that NASA has every right to be proud of their part in the most significant science event in the world for our youth.

## **Program**

Appendix S contains a program for the Science Olympiad National Tournament.

## **Contribution to the Scientific Community**

While the scientific community of this country consists of thousands of dedicated concerned individuals, very few of them are in a position to have a major impact on what takes place in the science classrooms of their community, let alone the entire nation.

We have used the funds (approximately \$150,000) generated by industry, government and Auburn University to create excitement about science in some 8,000 schools around this country.

We have made science fun and challenging, we have emphasized academics, and we have recognized and rewarded academic excellence among both teachers and students. We have caused thousands of students to be excited about participating in a science event, we have made them glad they are studying science and we have caused them to seriously consider continuing their science careers.

We have hosted the largest and most significant science event in the world for our youth. We have conducted the most successful Science Olympiad to date. We have set a new standard.

We challenged NASA to be a significant part of this effort and they met that challenge in typical NASA fashion.

**Mission Accomplished!!!**



## **Appendix A**

List of all teams (by division) that participated in the 1992 Science Olympiad National Tournament





## Division B

# Science Olympiad National Tournament

Team #	State	School	Head Coach
1 B	WI	Morse Middle School	Al Stawicki
2 B	NY	North Syracuse Junior High	Rita Kubert
3 B	NE	Irving Junior High	Peg Connealy
4 B	OH	Kimpton Middle School	Ron Ething
5 B	DE	Hanby/Concord	Lyn Newsom
6 B	DE	Henry B. duPont Middle School	Thomas Hounsell
7 B	OR	Whitford Intermediate	Richard Duncan
8 B	LA	E. A. Martin Middle School	Juanita Guerin
9 B	WA	Frontier Junior High	Chris Koester
10 B	ME	Jay Jr. High School	Ray Chase
11 B	CO	Dunstan Middle School	Bruce Hogue
12 B	MO	Plattsburg Jr. High	Lynda Rosander
13 B	CA	Bell Junior High School	James Ballantine
14 B	IL	Hill Middle School	Peggy McCall
15 B	KY	Bell County Middle School	Chuck Blank
16 B	TX	Westview Middle School	Jesus T. Garcia
17 B	CA	Winston Churchill Middle School	Bob Wofford
18 B	GA	Booth Middle School	Mary Wilde
19 B	WI	Wilson Jr. High School	Gary Krueger
20 B	TN	Bearden Middle School	Brenda Miller
21 B	VA	Elydale Elementary	John Janeway
22 B	MT	Big Timber / Sweet Grass County	Rolland Karlin
23 B	IL	South Jr. High	Katie Kaufman
24 B	NM	San Miguel School	Mary Nutt
25 B	AZ	Utterback Middle School	John Rhodes
26 B	SC	Irmo Middle School - Campus R	Wendy Morris
27 B	IN	Thomas Jefferson Middle School	Richard Bender
28 B	NY	Weber Jr. High School	Don Fish
29 B	PA	Peirce Middle School	Charlotte Knighton
30 B	MD	Bennett Middle School	Penny Caldwell
31 B	MO	Excelsior Springs	Barbara Armstrong
32 B	AL	Auburn Jr. High	Michael Patrick
33 B	MN	Twin Bluff Middle School	Jim Bergeson
34 B	MI	Slauson Middle School	Jeffrey Bradley
35 B	NC	Liberty Junior High	Janet McDaniel
36 B	SD	Yankton Middle School	Tom Merrill
37 B	PA	Stroudsburg Middle School	Mrs. Robison
38 B	CO	Woodland Park Middle School	Christa Lundberg
39 B	ND	Valley City Jr. High	Dennis Friestad
40 B	KS	St. Thomas Aquinas	Mary Beth Castleberry
41 B	UT	S. Ogden Jr. High	Holly Barker
42 B	OH	Bennett Jr. High	Vickie Miller
43 B	GA	White Water Middle School	Julie Prather
44 B	MI	Jenison Jr. High	Annette Dobrzynski
45 B	FL	McNair Magnet School	Jana Gadielski
46 B	WY	McCormick Jr. High	Steve Siegel
47 B	RI	Lincoln Junior High	Michelle Bailey
48 B	NC	Our Lady of Lourdes School	Mary Jane Davis





## Division C

# Science Olympiad National Tournament

Team #	State	School	Head Coach
1 C	RI	Classical High School	Michael Specht
2 C	SD	Yankton High School	Robert Medeck
3 C	OH	Kettering Fairmont H.S.	Maggie Martin
4 C	WA	Joel E. Ferris High School	Cinda Parton
5 C	ME	Oxford Hills High School	Jeff Cook
6 C	NE	Lincoln Southeast High School	Jake Winemiller
7 C	WY	Green River High School	Alex Katchuk
8 C	IL	Illinois Mathematics & Science Academy	Robert Hattaway
9 C	DE	Alexis I. duPont High School	Jillann Hounsell
10 C	TX	Langham Creek High School	Sam Saenz
11 C	NM	Albuquerque Academy	Tom Bucannon
12 C	KS	Wichita High School North	Janice Crowley
13 C	GA	Stone Mountain High School	K.C. Nainan
14 C	NC	NC School of Science & Math	John Kolena
15 C	OR	Beaverton High School	Dean Smith
16 C	AL	Muscle Shoals High School	Teena Noles
17 C	SC	Irmo High School	Glenda George
18 C	MS	Northeast Lauderdale High	Peggy Clayton
19 C	NY	Maine-Endwell High School	Warren Gulden
20 C	NC	Chapel Hill High School	Carolyn Morse
21 C	GA	Newnan High School	Beverly Lang
22 C	VT	Morgan High School	Mark Nethercolt
23 C	MT	Bozeman High School	Lisa Rogers
24 C	VA	Thomas Walker High School	Bruce Hendrickson
25 C	CA	Rio Americano High School	Nancy Smith
26 C	LA	C.E. Byrd High School	Hal Meekins
27 C	IN	Gavit High School	Laurel Krol
28 C	CA	La Jolla High School	Shauna Neubauer
29 C	AL	Lanier High School	Jennie McConnell
30 C	NY	Cicero-North Syracuse High	Barry Crossman
31 C	MA	Cambridge Rindge and Latin School	Kate Dollard
32 C	WI	Madison West High School	Van Valaskey
33 C	CO	George Washington High School	Lloyd Hendricks
34 C	FL	Bloomington Senior High	Marian Marley
35 C	MO	Ladue Horton Watkins High	Tony Kardis
36 C	MI	Forest Hills Central High	Suzanne West
37 C	OH	Centerville High School	Marcia Akridge
38 C	IN	North Central High School	Katie Vitolins
39 C	TN	Franklin High School	Karen Mauldin
40 C	MN	Apple Valley High School	Neil Michels
41 C	MI	Grand Haven Senior High	Lane Smith
42 C	MO	Pembroke Hill School	Connie Wells
43 C	ND	Fargo South Dakota High	Steve Kennedy
44 C	DE	St. Mark's High School	Dennis Swartzfagor
45 C	PA	Havenford High School	Roger Demos
46 C	KY	Hopkinsville High School	James Chiles
47 C	PA	Stroudsburg High School	Tara Devivo
48 C	AZ	University High School	Bob Thomas



## **Appendix B**

**Information package sent to all participating teams**

The volume of this information package is such that it is not practical to include it in this final report. The following amounts to a sample of the types of information sent that is not duplicated elsewhere in these appendices



# Tentative Schedule of Events

## Division B (Grades 6 - 9)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 137				Team # 1-25 CY 137		Team # 26-50 CY 137	
Astronomy; Part I Student Activities Bldg., Room 104			Team # 18-34 St. Act. 104	Team # 1-17 St. Act. 104	Team # 35-50 St. Act. 104		
Bio-Process Lab Cary Hall 217	Team # 26-50 CY 217	Team # 1-25 CY 217					
Don't Bug Me Funchess Hall 203				Team # 26-50 FS 203	Team # 1-25 FS 203		
Keep The Heat Cary 209			Team # 1-25 CY 209	Team # 26-50 CY 209			
Measurement Parker Hall 120/122	Team # 1-25 PKH 120/122	Team # 26-50 PKH 120/122					
Metric Estimation Saunders Lab 324	Team # 1-25 SN 324	Team # 26-50 SN 324					
Picture This Haley Center			Team # 13-24 HC	Team # 38-50 HC	Team # 1-12 HC	Team # 25-37 HC	
Road Rally Haley Center 2406					Team # 26-50 HC 2406	Team # 1-25 HC 2406	
Rocks, Minerals and Fossils Haley Center 2174/2169		Team # 26-50 HC2174/2169	Team # 1-25 HC2174/2169				
Science Bowl Haley Center 2370	Team # 1-18 HC 2370	Team # 19-36 HC 2370	Team # 37-50 HC 2370				Semi-Finals & Finals
Science Crime Busters Saunders Lab 212	Team # 26-50 SN 212	Team # 1-25 SN 212					
Simple Machines Parker Hall 104/108	Team # 18-34 PKH 104/108	Team # 1-17 PKH 104/108	Team # 35-50 PKH 104/108				
Sounds of Music Goodwin Music Hall	Team # 27-34 GB	Team # 10-18 GB	Team # 43-50 GB	Team # 19-26 GB	Team # 35-42 GB	Team # 1-9 GB	
Weather or Not Chemistry Building 134				Team # 1-25 CB 134	Team # 26-50 CB 134		
Write It/Do It Saunders Lab 300/306					Team # 1-25 SN 300/306	Team # 26-50 SN 300/306	

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Aerodynamics Aloft Student Activities Building	All Teams Student Activities Building (Main Gym Floor, room 103)						
Astronomy; Part II Student Activities Building	All Teams Student Activities Building.						
Bridge Building Student Activities Building.	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Egg Drop Haley Center - Stair Well East Side	All Teams Haley Center - Stair Well East Side						
Get Your Bearings	All Teams						
Mousetrap Vehicles Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, East Concourse						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Trajectory Contest St. Act. Building, Main Floor	All Teams Student Activities Building (Main Gym Floor, Room 103)						

SPECIAL EVENT	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy union, room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab; Room 314	All Teams Saunders Lab; Room 314						

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# Tentative Schedule of Events

## Division C (Grades 9-12)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 201	Team # 1-25 CY 201	Team # 26-50 CY 201					
Balancing Equations Chemistry Building 151			All Teams CB 151				
Bio-Process Lab Cary Hall 217					Team # 1-25 CY 217	Team # 26-50 CY 217	
Cell Biology Punchess Hall 208				Team # 18-34 FS 208	Team # 1-17 FS 208	Team # 35-50 FS 208	
Chemistry Lab Saunders Lab 224	Team # 1-17 SN 224	Team # 18-34 SN 224	Team # 35-50 SN 224				
Circuit Lab Parker Hall 114/118		Team # 35-50 PKH 114/118	Team # 18-34 PKH 114/118	Team # 1-17 PKH 114/118			
Computer Programming Tichenor Hall 203		Team # 1-25 TR 203	Team # 26-50 TR 203				
Designer Genes Cary Hall 136				All Teams CY 136			
Don't Bug Me Funchess Hall 203	Team # 26-50 FS 203	Team # 1-25 FS 203					
It's About Time Saunders Lab 212				Team # 26-50 SN 212		Team # 1-25 SN 212	
Measurement Parker Hall 120/122					Team # 26-50 PKH 120/122	Team # 1-25 PKH 120/122	
Metric Estimation Saunders Lab 324				Team # 1-25 SN 324	Team # 26-50 SN 324		
Physics Lab Parker Hall 100/102			Team # 35-50 PKH 100/102	Team # 1-17 PKH 100/102	Team # 18-34 PKH 100/102		
Qualitative Analysis Saunders Lab 216	Team # 26-50 SN 216		Team # 1-25 SN 216				
Road Rally Haley Center 2406	Team # 1-25 HC 2406		Team # 26-50 HC 2406				
Rocks, Minerals & Fossils Haley Center 2174/2169					Team # 1-25 HC2174/2169	Team # 26-50 HC2174/2169	
Science Bowl Haley Center 2370				Team # 19-36 HC 2370	Team # 37-50 HC2370	Team # 1-18 HC2370	Semi-finals & Finals
Sounds of Music Goodwin Music Hall	Team # 43-50 GB	Team # 10-18 GB	Team # 1-9 GB	Team # 35-42 GB	Team # 19-26 GB	Team # 27-34 GB	
Write It/Do It Saunders Lab 300/306	Team # 1-25 SN 300/306	Team # 26-50 SN 300/306					

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Get Your Bearings	All Teams						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Scrambler Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, West Concourse						

SPECIAL/DEMO EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab; Room 314	All Teams Saunders Lab; Room 314						



**PRELIMINARY STUDENT REGISTRATION**  
**1992 NATIONAL SCIENCE OLYMPIAD**  
**AUBURN UNIVERSITY**  
**DIVISION C (Grades 9 - 12)**

Please return this completed form by April 22, 1992 (or sooner if possible). This information will be used to prepare certificates of participation ahead of time. You may make changes to your list at registration on May 15.

School: \_\_\_\_\_ Teacher/Coach: \_\_\_\_\_  
 State: \_\_\_\_\_ Team #: \_\_\_\_\_ Division: \_\_\_\_\_

	Student Name	Home Address	City/State/Zip	Grade	T-Shirt Size (S, M, L, XL)
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____



**FINAL STUDENT REGISTRATION FORM**  
**1992 SCIENCE OLYMPIAD NATIONAL TOURNAMENT**  
**AUBURN UNIVERSITY, AUBURN , ALABAMA**  
**DIVISION C (Grades 9 - 12)**

This form must be completed and turned in at registration on May 15, 1992. Please place an asterisks (\*) beside each name that was not on your preliminary registration form and we will make certificates for those students.

School: \_\_\_\_\_ Coach: \_\_\_\_\_  
 State: \_\_\_\_\_ Team #: \_\_\_\_\_ Division: \_\_\_\_\_

Student Name	Home Address	City/State/Zip	Grade
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____

NOTE: Division C teams are limited to SEVEN twelfth grade students.

I certify that all of these students are active members of our school and the grade levels are appropriately indicated.

\_\_\_\_\_  
 Principal's Signature





DIVISION B/C

# 1992



## NATIONAL SCIENCE OLYMPIAD WATER QUALITY DEMONSTRATION EVENT

### Auburn University

#### Description

The objective is to demonstrate an appreciation and understanding of aquatic ecology and water resource management. This event has two required parts and an extra-credit bonus part. Part I, worth 20 points, is a practical problem that demonstrates the team's ability to measure water flow in a stream. Part II, worth 80 points, is an integrative problem-solving exercise. Teams use process skills to examine water quality and watershed data and then answer multiple-choice questions that demonstrate their ability to describe lake/watershed ecosystems, identify pollution sources and effects, and suggest appropriate solutions. Extra-credit bonus points (up to 5) will be added if the team brings to the competition an original recording of a musical composition made with water sounds.

Number of Participants: 2

Approximate Time: 50 minutes

#### **Part I (20 points)**

Teams must develop a method to measure stream flow rate and velocity. Teams must bring all materials required to make these measurements with them to the event. A time limit of five minutes will be allowed for the measurement. The stream will consist of a six-foot long section of four-inch inside-diameter PVC pipe with a section cut away for access with a two-meter stick attached. The width of the stream will be less than four inches, and the flow rate will be less than 50 gallons per minute. Collection, blockage or diversion of the entire stream flow is not allowed. Partial blockage or partial interruption are allowed only for the purpose of installing any device used for measurement.



Teams must report the stream flow rate in cubic meters per second (maximum 10 points), and the stream velocity in meters per second (maximum 10 points). Total point value of this activity is 20 points; points will be awarded on a graduated scale established in ranges.

## **Part II (80 points)**

In this problem-solving event, teams will employ process skills (e.g., using simple scientific instruments, making observations, interpreting data, and making inferences and conclusions) to compare and contrast the water quality, biology and watershed data from two lakes. Teams will do simple tests to determine the water quality of "Lake Laura" and "Lake Justin", which are two artificial "impoundments" designated for public water supply, aquatic life, and recreational uses. Each team will be required to answer multiple-choice questions using the data they collect and their knowledge of aquatic ecology, biology, watershed impacts, and pollution prevention and water treatment measures.

Each team will be able to collect water samples from the two artificial "lakes" and "test" them for temperature, acidity, pH, salinity, and turbidity (absolute measurements are not required - ranges will suffice). Each team needs to bring simple water testing devices to the competition that must be student made, except for the thermometer, and cost no more than \$10 (e.g., red cabbage acid/base indicator, salinometer, Secchi disk). No commercial kits are allowed.

Teams may be required to test for phosphates, nitrates and/or dissolved oxygen using kits provided on site.

Each team will also be provided with topographic and land use maps that show the major activities in the lakes and watersheds that may contribute to pollution.

Students will integrate their water quality test data and observational data with additional information provided about the lakes and their watersheds to answer multiple-choice questions. The questions require them to describe the lake/watershed ecosystem, including aquatic organisms likely to be present; identify pollution problems and sources of those problems; describe effects of pollution on aquatic organisms; and suggest appropriate pollution control and drinking water treatment measures.

-more-



Each team will be given an answer sheet and directions for the multiple-choice test. All responses will be recorded on the answer sheet. The questions on the multiple-choice test will be based on information gathered and/or provided about the lake/watershed ecosystems as related to concepts found in the following references:

1. *Polluted*. 1990. EPA pamphlet.
2. *Your Drinking Water From Source to Tap*. 1990. EPA pamphlet.
3. *American Wetlands*. 1991. EPA pamphlet.
4. *Citizen's Guide to Groundwater Protection*. 1990. EPA pamphlet.
5. *Aquatic Field and Classroom Activities*. Conservation Education Series. 1988. Missouri Department of Conservation, pp. 3-7, 15-17, 20-22, 26, 42.
6. *Teaching Soil and Water Conservation. A Classroom and Field Guide*. 1986. USDA Soil Conservation Service. Program Aid No. 341. p. 7-8, 12-19, 30.
7. *A Lake Is a Reflection of its Watershed: Use Best Management Practices to Protect Water Quality*. 1991. EPA Region 7 Poster.

### **Part III (5 point bonus)**

This is a bonus project and is graded on a scale of 1-5. It requires students to use the creativity to compose a musical medley on an audio cassette using the sounds of water. The composition must be a maximum of one minute and 30 seconds in length. Grading will be done on composition, ingenuity and originality. The points will be added to the total of Part I and II.

As an option, students may read an original poem or sing an original song about water.

For additional information contact:

Bill Landis  
PBAF  
U.S. EPA, Region 7  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
(913) 551-7003

Donna Sefton  
PBAF  
U.S. EPA, Region 7  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
(913) 551-7500



# Hometown Newspaper Information

We plan to make a concerted effort to get appropriate information to your hometown newspaper(s) before and immediately after the national competition. In order to manage this task, we need your help in providing us with the following information concerning your local newspapers. If you want the information sent to more than one newspaper, please list the necessary information for each newspaper you wish us to contact.

Please complete this form and return with your preliminary student registration form.

School: \_\_\_\_\_ Team #: \_\_\_\_\_  
Teacher/Coach: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Newspaper Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone Number: \_\_\_\_\_

Newspaper Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone Number: \_\_\_\_\_

Newspaper Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone Number: \_\_\_\_\_



# A MISSION TO PLANET EARTH

## REMEMBER!!!!

THE SPECIAL EVENT, "A MISSION TO PLANET EARTH", IS A WALK-IN EVENT AND IS SCHEDULED FOR BOTH FRIDAY AND SATURDAY (SEE THE EVENT RULES FOR DETAILS). YOU MAY WANT TO CONSIDER DOING THE EVENT ON FRIDAY SO THAT YOU DON'T HAVE A SCHEDULING PROBLEM ON SATURDAY. KEEP THIS IN MIND WHEN SCHEDULING OTHER FRIDAY ACTIVITIES.

KEEP IN MIND THAT THE FIRST PLACE WINNERS IN THIS EVENT WILL RECEIVE SCHOLARSHIPS TO *SPACE CAMP* AT THE U.S. SPACE AND ROCKET CENTER (ALSO ONE TEACHER FROM THE WINNING SCHOOL RECEIVES A SCHOLARSHIP). ALTERNATES MAY PARTICIPATE IN THIS EVENT.



## INFORMATION ABOUT AUBURN UNIVERSITY FOOD SERVICES

Auburn University Food Services is proud to assist in hosting the National Science Olympiad. We hope that you will be successful in your competition and that your visit to Auburn will be enjoyable. All Food Services facilities will be open for business during your stay.

Many of you will purchase meal tickets for the convenience and the attractive options that are available through the plan. If for some reason, you do not buy your tickets in advance, we will make them available at registration; and the tickets will always be available at Terrell Cafeteria and War Eagle Cafeteria.

All Food Services facilities are open to the public including those that will be used for the meal plan. All our facilities operate on an a la carte basis and accept cash and checks. The following is a list of our operations and a brief description of the services offered.

Terrell Cafeteria is located in the Hill Dorm area. Terrell Cafeteria will probably become very familiar to you. It is one of the choices for the meal plan; and the Friday night buffet and ice cream party will be served there. But Terrell is much more than a cafeteria. It also houses the Hill Restaurant, open Monday through Thursday from 5:00 to 8:00 p.m., and Sunday for brunch from 10:30 a.m. - 1:30 p.m. The L'il Eagle Convenience Store and bakery outlet is also located there, offering fresh baked pastries and cookies and convenience items, such as cokes and chips. Terrell also has a snack bar which stays open until 9 P.M. This is an excellent place to get a pizza, burger or a deli sandwich for a late snack.

WAR EAGLE CAFETERIA is located in Foy Student Union Building. War Eagle is our largest facility. It is located in the center of campus and is the other choice for your meal plan. War Eagle also has a snack bar for fast foods and features a "make your own" salad and sandwich shop, called the LITE SIDE. War Eagle also provides the catering service for the department and will serve the Saturday Prime Rib Buffet upstairs in the Foy Union Ballroom.

TAKE TEN BURGERS AND FRIES is located in the Haley Center directly below the University Bookstore. Take Ten is a beautiful new fast food restaurant featuring char-broiled sirloin burgers and chicken breast fillets. On Saturday you may use your meal plan lunch ticket at Take Ten.



April 30, 1992

To: Olympiad Coaches  
From: W.D. Perry & Marllin Simon  
Subject: Update



Enclosed you will find the following additional information:

- Invitation from the School of Human Science for a coffee/Idea Exchange
- Information on a new Special Event (alternates may participate)
- Information on Teacher Workshops
  - NASA Mobile Teacher Resource Center Workshop
  - Lunar Sample Workshop
- Information on Satellite uplink of Olympiad activities
- Information on Teacher/Coach Hospitality Room

You may want to leave the following emergency phone numbers with the appropriate people:

(205) 844-4870	8:00 a.m. - 5 p.m., Friday and Saturday
(205) 844-4158	All other times

Also for your information, Alabama is on Central Standard Time.

We look forward to seeing you in Auburn.



# SPECIAL NOTICE - SATELLITE UPLINK

Auburn University will be doing a satellite uplink three times during the Science Olympiad National Tournament. Please pass this information on to local TV stations so that your team and the Science Olympiad can get some "air-time". Also, please pass this information to parents since anyone with a satellite dish can receive the entire transmission.

All times listed below are Central Standard Time.

Date: Friday, May 15, 1992  
Time: 9:30 - 9:45 p.m.  
Satellite: Galaxy VI; Channel 16

Date: Saturday, May 16, 1992  
Time: 4:30 - 4:45 p.m.  
Satellite: Galaxy VI; Channel 24

Date: Saturday, May 16, 1992  
Time: 9:30 - 9:45 p.m.  
Satellite: Galaxy VI; Channel 24

If there are any questions, please call:

Jim Jackson  
University Relations  
Auburn University  
(205) 844-9999



April 10, 1992

1992 National



Auburn University

To: Science Olympiad Coaches  
From: Marillin Simon & W.D. Perry  
Subject: Travel and Lodging

The purpose of this memo is twofold:

- I. We wish to reinforce statements made in earlier information you received about travel. Namely, Auburn, "The loveliest village of the plains", is just that, a village. We have no public transportation, no taxis, buses, subways, monorails, nothing.

If you stay at one of the following three motels you can get by without ground transportation, just shuttle service to and from the airport.

- a) Auburn University Hotel and Conference Center
- b) Heart of Auburn Motel
- c) Auburn Motel

If you stay at any other site you will need ground transportation. If you get in a bind and need some help, you can get limited ground services from Dixie Excursions:

Dixie Excursions: (205) 887 - 6295 or (205) 887 - 6294

- II. We would like to encourage fair play when making lodging arrangements. If everybody doubles up with maximum occupancy per room we will not have a lodging problem.. If not, a few teams may have to commute from Montgomery or Lanett. Please compress your lodging and cancel any extra rooms you may have booked.
- III. We look forward to seeing you in Auburn for the Science Olympiad National Tournament.



# Auburn University

Auburn University, Alabama 36849-5212

Curriculum and Teaching  
5040 Haley Center

Telephone: (205) 844-4434  
ATTNet: 221-4434

March 5, 1992

Office phone: (205) 844-6799

Junior High Olympiad Coach :

Congratulations on winning your state Science Olympiad! I know you are looking forward to attending the National Science Olympiad in May.

We are interested in learning more about what contributes to students' success in the science olympiad. We would like to know if there is any connection between a student's reasoning skills and their scores in selected events that require logical thinking. I am inviting you and your students to help us find out by participating in a research study. This project has been approved by the National Olympiad President, Dr. Gerard Putz.

The study requires that each of your (five) students who will take part in (a) Bio-process Lab, (b) Road Rally, and (c) Science Crime Busters take a Group Assessment of Logical Thinking (GALT) test and answer a few questions about themselves. The test requires about 45 minutes, and must be given under controlled conditions to each student. We will compare their GALT results with later Olympiad performance.

You and your students have three choices. You may (1) decline to participate, since the study is voluntary. You may elect to (2) have me send you the GALT to administer in your school under your supervision and return the answer sheets to me. Or you may (3) register for a one-hour block of time on Friday, May 15th, when we will administer the GALT here in the Auburn Hotel and Conference Center to the five students on your team scheduled to participate in one of the above three events. These appointments are scheduled so that you and your other students will have time to register and take one of the campus tours while these five students take the research test.

If you select options #2 or #3 above, your school will become eligible for a drawing in which we will award ten schools a CRC Handbook of Chemistry and Physics, 71st Edition. This handbook is a \$98 value, and should become a valuable resource for the ten schools selected at random to receive it. This is our thanks to the schools that help out with the research study. We will also make available a summary of the results to any school that requests it. Of course, your school and students' identity will be kept confidential. Names will be used only to join GALT scores with Olympiad results and then removed.

If you choose to participate, please have the five students who will take part in the above three events sign one of the consent forms enclosed. Would you please complete the short list of questions on the attached page and return it with the student consent forms to me in the enclosed self-addressed, postage-paid envelope? If you have questions, please phone me at (205) 844-6799. Or you may contact Dr. W.D. Perry at (205) 844-6956. Thanks for your help!



Bill Baird  
Associate Professor

enclosure : consent form for students, short question list for coaches  
cc : Gerard Putz, National Olympiad Office





*Exploring the World of Science*

School Name : \_\_\_\_\_

School Address: \_\_\_\_\_

City, State, Zip : \_\_\_\_\_

School Phone Number : (        ) \_\_\_\_\_

Coach's Name: \_\_\_\_\_

Even if you do not participate in this research, please circle your answer to the questions below and return this form to Dr. Bill Baird, 5040 Haley Center, Auburn University, AL 36849-5212. A self-addressed, postage-paid envelope is enclosed.

- 1) I have decided (A) TO PARTICIPATE      (B) NOT TO PARTICIPATE in the research study at Auburn.
- 2) Frequency with which you have labs in your primary science course(s) now:  
(1) never,      (2) once a month,      (3) twice a month,      (4) every week,      (5) more often
- 3) Type of school in which you teach:  
(1) country,      (2) suburban public,      (3) city,      (4) consolidated      (5) private
- 4) Student enrollment in your school :  
(1) less than 500,      (2) 500-750,      (3) 751-1000,      (4) 1001-1500,      (5) larger than 1500
- 5) Number of years you have taught science:  
(1) less than two,      (2) 2 - 4,      (3) 5 - 10,      (4) 11 - 20,      (5) more than 20
- 6) Your use of microcomputers at school :  
(1) daily,      (2) 2-3 times a week,      (3) weekly,      (4) once a month,      (5) never
- 7) Your use of microcomputers outside of school :  
(1) daily,      (2) 2-3 times a week,      (3) weekly,      (4) once a month,      (5) never
- 8) Circle all grades enrolled in your school:  
1      2      3      4      5      6      7      8      9      10      11      12

- 9) If you selected option (B) in question #1 above, please indicate where your students will take the GALT:  
(1) locally in your school      (2) on the Auburn campus on May 15th by appointment

If you selected (1) above, I will send you five copies of the GALT and answer sheets no later than May 1st.  
You will administer the test during a one-hour period on your campus and return the answer sheet to me.

If you selected (2) above, circle an appointment hour for testing in the Auburn Hotel and Conference Center.  
9:30 a.m. 10:30 a.m. 11:30 a.m. 12:30 p.m. 1:30 p.m. 2:30 p.m. 3:30 p.m. 4:30 p.m.

If you would like to receive a summary of the results of this research, check here \_\_\_\_\_. Allow six months for us to compile and analyze the data and write up the report.



Informed Consent  
for  
**Correlates of Science Olympiad Success**  
Auburn University  
Department of Curriculum & Teaching

You are invited to participate in a study of factors that are associated with success in the Science Olympiad. We hope to learn if there is any relationship between reasoning abilities and success in specific events of the science olympiad among participating students. You have been selected to participate because of your previous demonstrated success in the olympiad.

If you decide to participate, we will ask you to answer a few questions about yourself and complete a test of your reasoning ability. The total time required to complete the questions and test will be one hour or less. This will be done during part of your free time before the day of the Olympiad on the Auburn campus, or at your home school. We will then examine correlations between your test scores and your olympiad scores. There is no risk to you or your team from participating in this study. With what we learn from this research we may be able to describe some of the factors that help people like you succeed in the science olympiad.

Any information obtained in connection with this study that could be identified with you will remain confidential. Only general information will be published, and it will not refer to specific students or schools by name. If you volunteer to participate by signing this form, your school will be eligible for a drawing to award 10 Handbooks of Chemistry and Physics.

Your decision on whether or not to participate will not jeopardize your potential success in the science olympiad or your future relations with Auburn University. You may discontinue participation at any time without penalty. If you decide later to withdraw from the study, we will purge any information we have collected about you.

If you have any questions, we invite you to ask us. If you have questions later, Dr. Bill Baird (5040 Haley Center, Auburn University, Auburn, AL 36849-5212) will be happy to answer them. Dr. Baird can be reached by phone at (205) 844-6799. You will be given a copy of this form to keep.

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time

\_\_\_\_\_  
Witness (Team Coach)

\_\_\_\_\_  
Subject's signature

*Bill Baird, PhD*  
\_\_\_\_\_  
Investigator's Signature



LODGING FACILITIES



Auburn University

This sheet summarizes information about the better Hotels and Motels in the Auburn - Opelika area. Tables I & II summarize accommodations and Table III gives contact person information. When making reservations be sure to mention that you are with the National Science Olympiad.

Table I: Hotel/Motel Information (all within 9 miles of Campus).

Hotel/Motel Name	Total Price per Room				Roll-a-way Beds	Handicap Rooms	Suites	Restaurant (near by)	Pool	Spa or Gym	Complimentary:	
	Single	Double	Triple	Quad.							Breakfast	Coffee
Auburn University Hotel and Conf. Center	69.00	69.00	69.00	69.00			7	Yes	Yes		No	No
Auburn Conference Center and Motor Lodge	39.50	43.50	46.50	49.50	10	1	0	Yes	Yes	No	No	No
Auburn Motel	33.00	38.00	43.00	48.00	0	0	0	Yes	No	No	Yes	No
Best Western - Opelika	29.00	36.00	41.00	46.00	0	1	0	Yes	Yes	No	No	Yes
Mariner Inn	28.00	33.00	38.00	43.00	4	0	0	Yes	Yes	No	Yes	Yes
Guest-House Inn	38.40	38.40	42.40	47.40	0	2	0	Yes	No	No	No	Yes
Heart of Auburn Motel	32.00	37.00	41.00	46.00	6	0	8	Yes	Yes	No	No	Yes
Holiday Inn	37.00	41.00	41.00	41.00	7	1	0	Yes	Yes	Yes	No	No
Motel 6	20.00	26.00	32.00	38.00	0	2	0	Yes	Yes	No	No	No
Red Carpet Inn	28.00	33.00	38.00	43.00	5	0	0	Yes	Yes	No	No	No

Table II: Hotel/Motel Information (to be used as backup - within 25 - 50 miles of Campus).

Hotel/Motel Name	Total Price per Room				Roll-a-way Beds	Handicap Rooms	Suites	Restaurant (near by)	Pool	Spa or Gym	Complimentary:	
	Single	Double	Triple	Quad.							Breakfast	Coffee
Court Yard Inn	56.00	66.00	66.00	66.00	Yes	Yes		Yes	Yes	Yes	No	Yes
Days Inn	29.95	37.95	41.95	45.95	Yes	Yes		Yes	Yes	No	No	No
EconoLodge	33.95	38.95	42.95	46.95	Yes	Yes		Yes	No	No	No	No
Hampton Inn	43.00	43.00	43.00	43.00	2	2		Yes	Yes	No	Yes	Yes
Montgomery-East												
Holiday Inn, Montgomery-East, I-85	55.00	55.00	55.00	55.00	5	2		Yes	Yes	No	No	No

Table III: Hotel/Motel Address and Phone Numbers.

Hotel/Motel Name	Sales Manager	Phone	Street Address	City, State and Zip	Distance from Campus
Auburn University Hotel and Conf. Center	Cynthia Love	(800) 228-2816	241 South College St.	Auburn, AL. 36830	Adjacent
Auburn Conference Center and Motor Lodge	Brent Burns	(205) 821-7001	1577 South College St.	Auburn, AL. 36830	1.5 miles
Auburn Motel	Gloriana	(205) 887-6583	129 North College St.	Auburn, AL. 36830	1 Block
Best Western - Opelika	Gary Bhula	(205) 749-1461	1002 Columbus Parkway	Opelika, AL. 36801	9 miles
Mariner Inn	Kanti B. Patel	(205) 749-8377	1005 Columbus Parkway	Opelika, AL. 36801	9 miles
Fireno Lodge	Ginna Vinson	(205) 745-6293	205 21st Street	Opelika, AL. 36801	5 miles
Guest-House Inn	Ken Wesson	(205) 887-3426	333 South College St.	Auburn, AL. 36830	Adjacent
Heart of Auburn Motel	Cherry Mancil	(205) 745-6331	1102 Columbus Parkway	Opelika, AL. 36801	9 miles
Holiday Inn	Alan R. Garrison	(205) 745-0988	1015 Columbus Parkway	Opelika, AL. 36801	9 miles
Motel 6	Kanti B. Patel	(205) 749-6154	1107 Columbus Parkway	Opelika, AL. 36801	9 miles
Red Carpet Inn	Sales Desk	(800) 321-2211	5601 Carmichael Rd at Eastern Bypass	Montgomery, AL 36117	50 miles
Court Yard Inn	Shirley McTurston	(205) 644-2181	I-85 at Ilwly 29, Exit 79	Lanett, AL/ West Point, GA	25 miles
Days Inn	Vick Sayania	(205) 768-3500	I-85 at Ilwly 29, Exit 79	Lanett, AL/ West Point, GA	25 miles
Econolodge	Mike Modozil	(205) 277-2400	1401 Eastern Blvd.	Montgomery, AL 36117	50 miles
Hampton Inn Montgomery-East	Michelle Martin	(205) 271-0550	1185 Eastern Bypass, US231 & I-85	Montgomery, AL 36117	50 miles
Holiday Inn, Montgomery-East, I-85					

## General Information

1. All participants and Teacher/Coaches will be the guest of Auburn University for dinner Friday night.
2. Dr. Bill Baird of the Auburn Curriculum and Teaching Department will be trying to learn more about what contributes to students' success in the Science Olympiad. His proposed research project will involve Division B teams. Please read the enclosed information on the project and try to participate if at all possible. The information can be found in the back cover pocket of this manual.
3. The enclosed Schedule of Events (dated March 31, 1992) supersedes the schedule you received in your state winners packet. We recommended that you dispose of the OLD schedule to avoid any possible confusion.
4. The awards ceremony on Saturday night is a dressy occasion. Please bring appropriate attire for the ceremony.
5. Our campus is fairly large, so please bring comfortable shoes. Also come prepared for the possibility of rain.
6. Instructions for the opening and closing ceremonies will be in the next mail out; however, you should plan to bring a state and school flag on collapsible poles for the opening ceremony.
7. You should note that the "swap meet" will be held in conjunction with the Ice Cream Social in Terrell Dining Hall following the opening ceremony.
8. Since Auburn University will still be in session during the Olympiad, dormitory accommodations will not be available.



# Event Information

The following is some important information about certain events. Please read carefully.

1. Devices used in the following events will be impounded the morning of the competition. Information on the impounding locations will be in your registration packets on May 15.

Astronomy Contest	(B)
Bridge Building	(B & C)
Egg Drop	(B)
Its About Time	(C)
Keep the Heat	(B)
Mousetrap Vehicle	(B)
Scrambler	(C)
Trajectory	(B)

2. The Scrambler competition will be held on a smooth, sealed concrete floor. The site of the competition will be available on Friday for anyone that wishes to practice.
3. The Mousetrap Vehicle competition will be held on a smooth, sealed concrete floor. The site of the competition will be available on Friday for anyone that wishes to practice.
4. The Egg Drop will be from a height of approximately 41 feet.
5. Computer Programming will be done on Zenith 286 machines running DOS 3.3.
6. Be certain to bring OSHA approved safety goggles for Science Crime Busters.
7. Be certain to bring OSHA approved safety goggles for the Trajectory Contest.
8. Be certain to bring equipment and OSHA approved safety goggles for Qualitative Analysis.
9. Be certain to bring OSHA approved safety goggles for Chemistry Lab.
10. Be certain to bring a compass for Get Your Bearings.
11. Be certain to bring a compass and watch for the Special Event (see enclosed information).
12. Please note that the Astronomy event is divided into two parts as suggested in the rules manual. Part I is a scheduled event and Part II is a walk-in event.
13. Be certain to bring a small flashlight with a red filter to the Astronomy event.
14. The NASA Special Event and the Water Quality Demonstration Event will not count toward the overall winners. However, medals will be awarded in these events. Both of these events are for Division B and C. Alternates may participate in these two events. Rules for both of these events are enclosed in the packet.



The "Scrambler"  
Clarification Sheet

To: All teams attending the National Science Olympiad in Auburn, AL  
From: Br. Timothy Paul, Event Judge (508-774-5767 - Massachusetts - leave message on machine)

Over the past few months several teams have requested clarification of the various rules for the Scrambler event. I thought it best to indicate to all teams how I plan to "interpret" the rules indicated in the Science Olympiad Coaches Manual as well as let teams know something of the site conditions at Auburn. I have also tried to answer some of the more common questions that have arisen at various State and Regional Olympiads. Before your team comes to the Olympiad: 1) Please read the rules carefully! 2) Please remember that the interpretation of the rules at regionals or states may NOT be the same as at the Nationals!

- Rule 1.a. The assembled system must fit inside of a 1 m. cube. Diagonal fits are OK.
- Rule 1.b. The falling mass will be measured against two standard one kg. laboratory masses. Be careful about using "standard" weight-lifting masses. They are often MORE THAN 2 kg in mass. If the falling mass is attached to a swinging arm, for example, the ENTIRE arm will be massed. If you have such a device, make sure that the arm is detachable so that it can be massed.
- Rule 1.c. Each team will be issued ONE and ONLY ONE egg. It will be numbered. If you break or crack the egg AT ANY TIME the scrambler device will be disqualified.
- Rule 1.d. Don't forget the egg backstop. You can't touch the vehicle once the mass is dropped.
- Rule 2.a. The "official" surface will be a smooth, sealed concrete floor. The start and finish lines will be marked with duct tape. The 10 meter distance will be between the edges of the duct tape marking the lines. The "terminal barrier" will be a wall one meter from the finish line boundary. A second "unofficial" surface will be marked out for practice. NO PRACTICE WILL BE ALLOWED ON THE "OFFICIAL" SURFACE.
- Rule 2.c. The intent of this rule is that the vehicle carrying the egg may not be touched once the mass has fallen. This applies particularly to touching the vehicle once it has completely left a launcher.
- Rule 2.e. Don't "throw" the falling mass to the floor!
- Rule 2.f. Don't put your egg carrying device on any ramp initially! The falling mass may pull a vehicle COMPLETELY up a ramp or raise a ramp. Egg carrying devices should be "level" with the floor initially. This is the intent of this rule.
- Scoring: TWO AND ONLY TWO "official" runs on the "official" surface will be permitted. There will be NO practice runs on the official surface. All practice runs should be done on the practice surface. The official runs must be completed in the 5 minute period allotted. This five minutes includes all setup time. Time for official measurements is NOT included in the five minutes. Devices not crossing the finish line as outlined in Rule 2.b. will receive a 30 second time penalty.



FROM: The Event Supervisors of "It's About Time"  
TO: All coaches planning to work temas in the Event.  
SUBJECT: References & Subject Preparation

To improve the competition in our event, we would like to suggest review of basic literature sources such as encyclopedias, world books, collegiate dictionaries, and etc., being sure to include the understanding of such vocabulary words as sidereal, solar, zone, and atomic time. Also included, but not limited, as such concepts as the ecliptic, the equation of time, and the calendar, especially with the events that occurred this year. With the use of any available text materials, be sure students review basic physics and physical principles as they affect time and timekeeping devices, as well as mechanics and the study of ratios, levers, pulleys, and wheels. There are any number of sources in your local libraries, both public and school, which have excellent information on the history of timekeeping and historical timekeeping devices. Students should have some rough idea of any timekeeping and time displaying devices which have been used over the millenia.

We also want to remind you that there is a \$500.00 First Place scholarship to be divided amongst the team members of this event, which is provided by the American Watchmakers Institute.



# National Science Olympiad

May 15-16, 1992  
Auburn University  
Auburn, Alabama

## Tentative Master Schedule of Olympiad Activities

Friday, May 15, 1992

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<u>Event</u>	<u>Location</u>	<u>Time</u>
Registration	Hotel and Conference Center	9:00 am - 4:30 pm
Teacher Workshops	Details Available Later	
Exhibits & Campus Tours	Details Available Later	10:00 am - 3:30 pm
NASA Special Event	Foy Union, Room 213	10:00 am - 4:30 pm
Movies	Langdon Hall	10:00 am - 4:30 pm
Lunch*	Terrell Dining Hall	11:00 am - 1:30 pm
Reception for Officials	Hotel and Conference Center	4:00 pm - 6:00 pm
Dinner (all participants)†	Terrell Dining Hall	4:00 pm - 6:00 pm
Seating/Opening Ceremony	Eaves Memorial Coliseum	6:00 pm - 6:30 pm
Opening Ceremony	Eaves Memorial Coliseum	6:30 pm - 8:30 pm
Swap Meet	Terrell Dining Hall	8:30 pm - 10:00 pm
Ice Cream Social & DJ	Terrell Dining Hall	8:30 pm - 10:00 pm
Supervisor/Coaches Meeting	Hotel and Conference Center	9:00 pm - 10:00 pm

Saturday, May 16, 1992

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<u>Event</u>	<u>Location</u>	<u>Time</u>
Breakfast*	Terrell Dining Hall	6:30 am - 9:30 am
Impound Devices	Details Available Later	8:00 am - 8:30 am
Science Olympiad Competition	Auburn University Campus	8:30 am - 4:30 pm
Teacher Workshops	Details Available Later	9:00 am - 4:00 pm
Lunch*	Terrell Dining Hall	11:00 am - 1:30 pm
Dinner*	Terrell Dining Hall & Hotel and Conference Center	4:30 pm - 7:30 pm
<b>Awards Ceremony</b>		
Division B		
Seating	Eaves Memorial Coliseum	6:00 pm - 6:30 pm
Ceremony	Eaves Memorial Coliseum	6:30 pm - 7:45 pm
Division C		
Seating	Eaves Memorial Coliseum	8:00 pm - 8:30 pm
Ceremony	Eaves Memorial Coliseum	8:30 pm - 9:45 pm

Sunday, May 17, 1992

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<u>Event</u>	<u>Location</u>	<u>Time</u>
Breakfast*	Terrell Dining Hall	6:30 am - 9:30 am
Officials' Rules Meeting	Hotel and Conference Center	7:30 am - noon

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\* See enclosed information on meals.

† Dinner on Friday night will be provided by Auburn University.



# Auburn University

Auburn University, Alabama 36849-5312

Department of Chemistry  
179 Chemistry Building



Telephone: (205) 844-6947  
Fax: (205) 844-6959

March 24, 1992

## TRAVEL INFORMATION

We would like to point out that Auburn ("The loveliest Village on the Plains") is somewhat isolated and has no public transportation (i.e. we have no taxis, busses, subways, helicopter landing pads or monorails). If you fly into the South, we recommend that you fly to Atlanta (or Huntsville if you plan to visit NASA and/or the U. S. Space and Rocket Center) and then rent mini-vans or cars for the trip to Auburn. While we are recommending that you rent mini-vans or cars we should mention that if you are staying in one of the following three motels, you can get by without ground transportation in Auburn - just shuttle service to Auburn from the airport and back. All Olympiad activities are within three to five blocks of these hotels and motels.

- 1) Auburn University Hotel and Conference Center
- 2) Auburn Motel
- 3) Heart of Auburn Motel

In order to assist you with your travel plans, we have named the MCDONNELL DOUGLAS TRAVEL COMPANY (MDTC) as the official travel company for the 1992 National Science Olympiad to be held at Auburn University. Their name, address and phone number are as shown below...

MCDONNELL DOUGLAS TRAVEL COMPANY  
13736 Riverport Drive  
Maryland Heights, MO 63043  
Phone: 800/325-3733  
FAX: 314/298-2098

We would like to encourage you to use the MDTC for the following reasons:

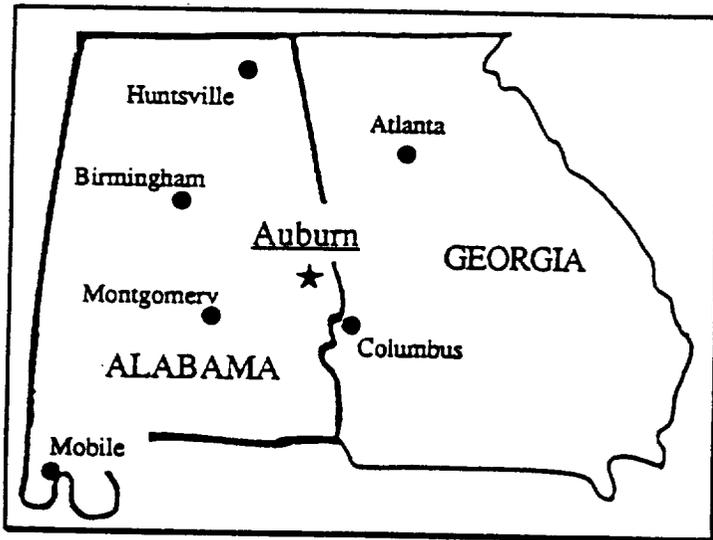
- i) MDTC has established a toll free 800 number just for the Science Olympiad.
- ii) One call to MDTC can take care of your air travel and your round-trip ground transportation between the airport and Auburn.

(OVER)

- iii) MDTC has negotiated discounted air transportation rates with the major airlines. In addition to getting better rates than your local agency, they can maintain these rates up to flight time (unless all of the discounted seats are sold out).
- iv) MDTC has negotiated discounted ground transportation rates.
- v) MDTC has sent a representative to Atlanta to work with the ground transportation people.
- vi) A MDTC representative will be in Atlanta for the duration of the Olympiad. She and/or some of her staff will meet your group, escort you through the luggage claim area and get you to your ground transportation.
- vii) McDonnell Douglas is a Corporate Donor to the 1992 National Science Olympiad.

Shown below is a regional map indicating the location of Auburn relative to Atlanta, Montgomery, Birmingham and Huntsville.

After we receive your registration information we will send you maps of the Auburn University Campus, Alabama and Georgia.



Mileage from Auburn:	
Atlanta, GA	110 miles
Montgomery, AL	55 miles
Birmingham, AL	115 miles
Huntsville, AL	200 miles

## **Appendix C**

Science Olympiad promotional brochure



## **Appendix D**

Promotional brochure for the pre-Olympiad events in Huntsville



## **Appendix E**

Souvenir Olympiad badge given to all participants



# Appendix F

Contents of the registration package



May 15, 1992

1992 National



To: Olympiad Coaches  
From: W.D. Perry & Marllin Simon  
Subject: Last Minute Details and Reminders

Auburn University

Welcome to Auburn! We hope you and your students have a very enjoyable weekend.

In this registration packet you will find the following:

- Maps, schedules & programs.
- Buttons, Commemorative Pins & Posters.
- T-Shirts.
- Name tags and ribbons for Teachers.
- Information on "Home-Base" assignment.
- Opening ceremony instructions.
- Coupons to be redeemed for Olympiad T-Shirts at AU Bookstore (for Teachers).
- Individual team assignments for Science Bowl and Picture this.
- Information on Pentathlon.

Please note the following:

- Event scores will NOT be posted during the day on Saturday. This will add to the excitement of the awards ceremony.
- Balancing Equations will be held at TWO time periods (9:40 and 10:50) rather than just one (10:50). Your team may elect to participate in Balancing Equations at **either** time period.
- The location of Astronomy Part II/walk-in has been changed to the basketball court in the pool, swim center.
- There will be no swapping of time slots for events. Except in the case of Balancing Equations, your team **must** participate at their scheduled time.
- Tournament Headquarters will be in Room 179 of the New Chemistry Building.
- It is not too late to sign up for the NASA Mobile Teacher Resource Center (LASER Van) workshop. Sign up at the registration desk.
- The Friday Activity "Gold and Hot Springs" will only be offered from 11-12 noon in room 2182 Haley Center (this event has been moved from Petrie 118).
- Please do not pass out the commemorative pins to your team. Bring the pins to the awards ceremony and there will be an appropriate time to pass out the pins.
- Everyone is our guest for dinner Friday night. Please see the enclosed sheet for times and locations.
- The Ice Cream Social and "Swap Meet" is in Terrell Dinning Hall, 8:30 - 10:00 p.m., Friday night.



The following events will be held on the SECOND FLOOR of Haley Center

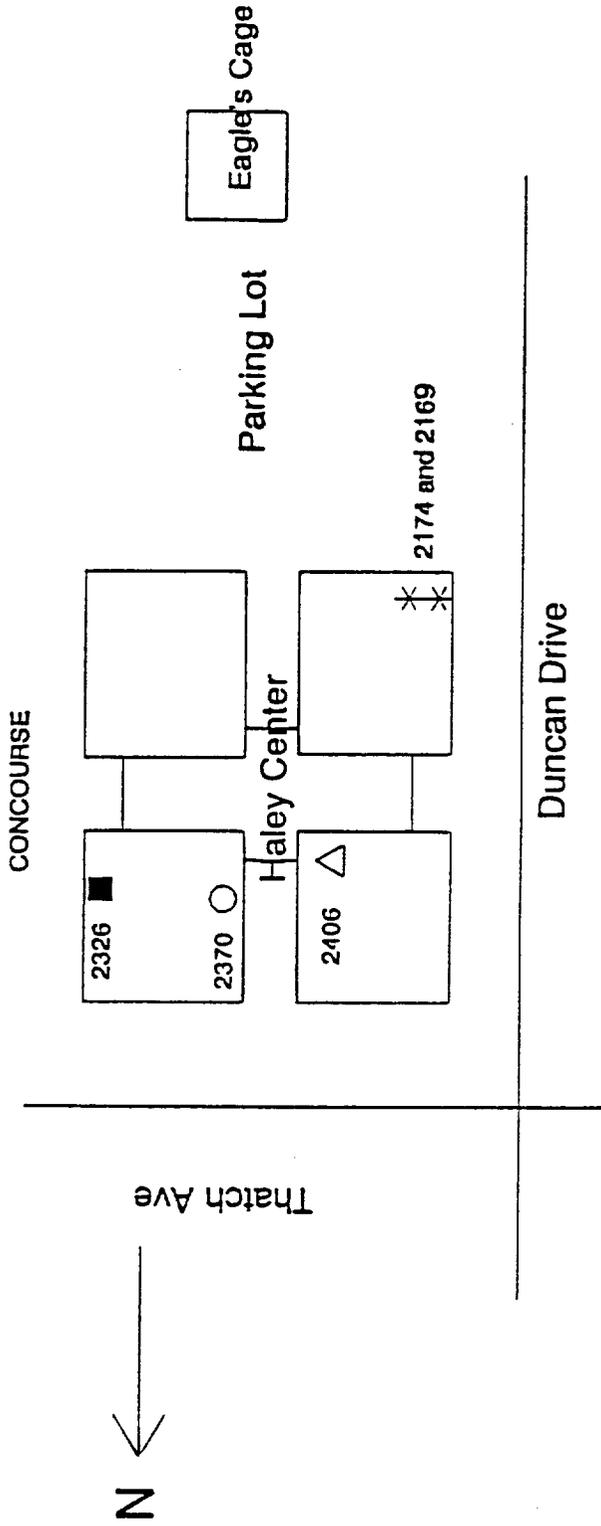
Below is a map of the approximate locations in Haley Center.

"Picture This" Room 2326 marked (B) ■

"Road Rally" Room 2406 (B/C) △

"Rocks, Minerals, and Fossils" Rooms 2174 / 2169 (B/C) \*

"Science Bowl" Room 2370 (B/C) ○





## OPENING CEREMONY

Gary Cantini of Auburn University will be handling the logistics of the opening ceremony.

The Opening Ceremony will be held in the Auburn University Memorial Coliseum.

An area on Roosevelt Drive, in front of the main entrance of the coliseum, will be blocked off and staffed by a security guard to help busses unload. After unloading, bus drivers will find it convenient to park in a designated area of the East parking lot. Adequate car parking exists in several lots adjacent to the coliseum.

6:00 PM                      Doors Open

6:00 - 6:30 PM              Seating at the South end (semi-circular) part of the coliseum (sections 15 through 25). Sections 26 and 27 are reserved for students who have participated in the parade of flags. A few rows of section 24 is reserved for corporate donors.

No blocking of large sections of seats will be allowed. This area will seat 3,100 persons and we are expecting a maximum of 3,000.

Each school should select three students to participate in the parade of flags. These students should have their state and/or school flag on a collapsible flag staff.

Students in the parade of flags should enter the coliseum on the East (Parking lot) side at the ground level. After entering they should proceed into the hallway of the ground floor, turn left and line up by state. State signs will be posted and school will enter in the order shown on the back of this sheet.

After the posting of the colors, we will have the Roll Call of the States. On key, the flag bearing students will enter the arena, walk across the arena floor in front of the stage through a strobe-tube aisle while golden scanners sweep through the aisle with multicolored lights of various patterns.

At the end of the strobe-tube aisle, students will line up according to the directions of the ushers and remain standing at that site (facing the stage) for the National Anthem. After the National Anthem, students from the parade of flags will be seated in sections 26 and 27 for the remainder of the program.

## AWARDS CEREMONY

Gary Cantini of Auburn University will be in charge of the Logistics of the Awards Ceremony. The Awards Ceremony will be held in the Auburn University Memorial Coliseum.

No blocking of large section of seats will be allowed. Seating for the Division B Ceremony will begin at 6:00 PM and seating for the Division C ceremony will begin at 8:00 PM.

Students receiving awards are asked to approach the stage using the center aisle, ascend the right and exit on the left stairs.

## Order for Roll Call of States

32B	AL	Auburn Jr. High	35B	NC	Liberty Junior High
29C	AL	Lanier High School	48B	NC	Our Lady of Lourdes School
16C	AL	Muscle Shoals High School	20C	NC	Chapel Hill High School
25B	AZ	Utterback Middle School	14C	NC	NC School of Science & Math
48C	AZ	University High School	39B	ND	Valley City Jr. High
13B	CA	Bell Junior High School	43C	ND	Fargo South Dakota High
17B	CA	Winston Churchill Middle School	3B	NE	Irving Junior High
28C	CA	La Jolla High School	6C	NE	Lincoln Southeast High School
25C	CA	Rio Americano High School	24B	NM	San Miguel School
11B	CO	Dunstan Middle School	11C	NM	Albuquerque Academy
38B	CO	Woodland Park Middle School	2B	NY	North Syracuse Junior High
33C	CO	George Washington High School	28B	NY	Weber Jr. High School
5B	DE	Hanby/Concord	30C	NY	Cicero-North Syracuse High
6B	DE	Henry B. duPont Middle School	19C	NY	Maine-Endwell High School
9C	DE	Alexis I. duPont High School	42B	OH	Bennett Jr. High
44C	DE	St. Mark's High School	4B	OH	Kimpton Middle School
45B	FL	McNair Magnet School	37C	OH	Centerville High School
34C	FL	Bloomington Senior High	3C	OH	Kettering Fairmont H.S.
18B	GA	Booth Middle School	7B	OR	Whitford Intermediate
43B	GA	White Water Middle School	15C	OR	Beaverton High School
21C	GA	Newnan High School	29B	PA	Peirce Middle School
13C	GA	Stone Mountain High School	37B	PA	Stroudsburg Middle School
14B	IL	Hill Middle School	45C	PA	Haverford High School
23B	IL	South Jr. High	47C	PA	Stroudsburg High School
8C	IL	Illinois Math. & Science Academy	47B	RI	Lincoln Junior High
27B	IN	Thomas Jefferson Middle School	1C	RI	Classical High School
27C	IN	Gavit High School	26B	SC	Irmo Middle School - Campus R
38C	IN	North Central High School	17C	SC	Irmo High School
40B	KS	St. Thomas Aquinas	36B	SD	Yankton Middle School
12C	KS	Wichita High School North	2C	SD	Yankton High School
15B	KY	Bell County Middle School	20B	TN	Bearden Middle School
46C	KY	Hopkinsville High School	39C	TN	Franklin High School
8B	LA	E. A. Martin Middle School	16B	TX	Westview Middle School
26C	LA	C.E. Byrd High School	10C	TX	Langham Creek High School
31C	MA	Cambridge Rindge and Latin Sch.	41B	UT	S. Ogden Jr. High
30B	MD	Bennett Middle School	21B	VA	Elydale Elementary
10B	ME	Jay Jr. High School	24C	VA	Thomas Walker High School
5C	ME	Oxford Hills High School	22C	VT	Morgan High School
44B	MI	Jenison Jr. High	9B	WA	Frontier Junior High
34B	MI	Slauson Middle School	4C	WA	Joel E. Ferris High School
36C	MI	Forest Hills Central High	1B	WI	Morse Middle School
41C	MI	Grand Haven Senior High	19B	WI	Wilson Jr. High School
33B	MN	Twin Bluff Middle School	32C	WI	Madison West High School
40C	MN	Apple Valley High School	46B	WY	McCormick Jr. High
31B	MO	Excelsior Springs	7C	WY	Green River High School
12B	MO	Plattsburg Jr. High			
35C	MO	Ladue Horton Watkins High			
42C	MO	Pembroke Hill School			
18C	MS	Northeast Lauderdale High			
22B	MT	Big Timber / Sweet Grass County			
23C	MT	Bozeman High School			

## "Home-Base" Room Assignments

For your convenience, we have assigned a classroom for your use as a "Home-Base" on Saturday. States represented by one B and one C division team have been assigned a single room, and states represented by more than two teams have been assigned two rooms.

We ask you to do the following:

- Use only the room(s) assigned to you.
- Remember that classes will be held in these rooms Monday morning.
- At the end of competition on Saturday, remove all of your "stuff" and your trash.
- If you rearranged the desks, please put them back like you found them.

## "Home-Base" Room Assignments

State	Room #	Building
AL	2204	Haley Center
	2206	Haley Center
AZ	2208	Haley Center
CA	2207	Haley Center
	2212	Haley Center
CO	2213	Haley Center
	2222	Haley Center
DE	2224	Haley Center
	2226	Haley Center
FL	2228	Haley Center
GA	2104	Haley Center
	2116	Haley Center
IL	3034	Haley Center
	3044	Haley Center
IN	3046	Haley Center
	3104	Haley Center
KS	3106	Haley Center
KY	3110	Haley Center
LA	3116	Haley Center
MA	3124	Haley Center
MD	3130	Haley Center
ME	3150	Haley Center
MI	3174	Haley Center
	3182	Haley Center
MN	3166	Haley Center
MO	3184	Haley Center
	3185	Haley Center

State	Room #	Building
MS	3170	Haley Center
MT	3187	Haley Center
NC	3191	Haley Center
	3194	Haley Center
ND	3196	Haley Center
NE	3198	Haley Center
NM	3202	Haley Center
NY	3204	Haley Center
	3206	Haley Center
OH	3208	Haley Center
	3212	Haley Center
OR	3218	Haley Center
PA	3220	Haley Center
	3222	Haley Center
RI	3224	Haley Center
SC	3226	Haley Center
SD	3228	Haley Center
TN	3238	Haley Center
TX	3318	Haley Center
UT	3324	Haley Center
VA	3326	Haley Center
WA	3328	Haley Center
WI	3330	Haley Center
	3332	Haley Center
WY	3334	Haley Center



ROOM ASSIGNMENTS FOR SCIENCE BOWL PARTICIPANTS

HEADQUARTERS WILL BE IN ROOM 2370 HALEY CENTER. YOU SHOULD REPORT TO THIS ROOM AHEAD OF TIME IN CASE THERE ARE ANY LAST MINUTE CHANGES. IF YOU HAVE ANY QUESTIONS OR PROBLEMS DURING THE DAY PLEASE CHECK WITH US AT HEADQUARTERS.

DIVISION C (SENIOR HIGH) - PRELIMINARY ROUNDS

<u>TIME</u>	<u>12:00 NOON</u>	<u>1:10 PM</u>	<u>2:20 PM</u>
HALEY CENTER	TEAMS:	TEAMS:	TEAMS:
ROOM 2456	27C, 30C, 36C	- - -	1C, 11C, 15C
ROOM 2474	25C, 31C, 34C	- - -	2C, 8C, 13C
ROOM 2454	21C, 32C, 35C	38C, 42C, 44C	4C, 5C, 6C
ROOM 2442	24C, 28C, 33C	37C, 39C, 43C	7C, 10C, 17C
ROOM 2438	20C, 22C, 29C	41C, 45C, 48C	3C, 9C, 16C
ROOM 2461	19C, 23C, 26C	40C, 46C, 47C	12C, 14C, 18C

DIVISION C - SEMI-FINALS\*

<u>TIME</u>	<u>3:30</u>
HALEY CENTER	TEAMS:
ROOM 2442	
ROOM 2438	
ROOM 2461	

DIVISION C - FINALS

<u>TIME</u>	<u>4:00</u>
HALEY CENTER	TEAMS:
ROOM 2370	

\* IF A TIE BREAKER IS NECESSARY, THE TEAMS INVOLVED SHOULD REPORT TO ROOM 2442 AT 3:15 PM.

ROOM ASSIGNMENTS FOR SCIENCE BOWL PARTICIPANTS

HEADQUARTERS WILL BE IN ROOM 2370 HALEY CENTER. YOU SHOULD REPORT TO THIS ROOM AHEAD OF TIME IN CASE THERE ARE ANY LAST MINUTE CHANGES. IF YOU HAVE ANY QUESTIONS OR PROBLEMS DURING THE DAY PLEASE CHECK WITH US AT HEADQUARTERS.

DIVISION B (JUNIOR HIGH) - PRELIMINARY ROUNDS

<u>TIME</u>	<u>8:30 AM</u>	<u>9:40 AM</u>	<u>10:50 AM</u>
HALEY CENTER	TEAMS:	TEAMS:	TEAMS:
ROOM 2456	8B, 12B, 15B	22B, 25B, 33B	37B, 43B, 45B
ROOM 2474	2B, 5B, 7B	19B, 27B, 28B	39B, 41B, 47B
ROOM 2454	4B, 10B, 16B	23B, 26B, 32B	38B, 40B, 42B
ROOM 2442	6B, 9B, 14B	24B, 34B, 36B	44B, 46B
ROOM 2438	3B, 17B, 18B	21B, 30B, 31B	- - -
ROOM 2461	1B, 11B, 13B	20B, 29B, 35B	- - -

DIVISION B - SEMI-FINALS\*

<u>TIME</u>	<u>3:30</u>
HALEY CENTER	TEAMS:
ROOM 2456	
ROOM 2474	
ROOM 2454	

DIVISION B - FINALS

<u>TIME</u>	<u>4:00</u>
HALEY CENTER	TEAMS:
ROOM 2456	

\* IF A TIE BREAKER IS NECESSARY, THE TEAMS INVOLVED SHOULD REPORT TO ROOM 2456 AT 3:15 PM.

"PICTURE THIS" TEAM ASSIGNMENTS

HALEY CENTER ROOM NUMBERS

	<u>2326</u>	<u>2330</u>	<u>2332</u>	<u>2334</u>
<u>10:50-11:05</u>	#13	#14	#15	#16
<u>11:05-11:20</u>	#17	#18	#19	#20
<u>11:20-11:35</u>	#21	#22	#23	#24
<u>11:35-11:50</u>		O P E N		
<u>12:00-12:15</u>	#38	#39	#40	#41
<u>12:15-12:30</u>	#42	#43	#44	#45
<u>12:30-12:45</u>	#46	#47	#48	#49
<u>12:45-1:00</u>	#50			
<u>1:10-1:25</u>	#1	#2	#3	#4
<u>1:25-1:40</u>	#5	#6	#7	#8
<u>1:40-1:55</u>	#9	#10	#11	#12
<u>1:55-2:10</u>		O P E N		
<u>2:20-2:35</u>	#25	#26	#27	#28
<u>2:35-2:50</u>	#29	#30	#31	#32
<u>2:50-3:05</u>	#33	#34	#35	#36
<u>3:05-3:20</u>	#37			



**ELEMENTARY SCIENCE OLYMPIAD SUMMER INSTITUTE  
JOHNSTOWN, PA- JUNE 16-19, 1992**

Please write for details about the Elementary Program

**SECONDARY SCIENCE OLYMPIAD SUMMER INSTITUTES  
LEELANAU ENVIRONMENTAL CENTER, GLEN ARBOR, MI JULY 13-17, 1992  
FLORIDA INSTITUTE OF TECHNOLOGY, MELBOURNE, FL JULY 29-AUG 2, 1992  
THE NATURE PLACE, COLORADO SPRINGS, CO AUGUST 5-9, 1992**

For Teachers, Coaches, Supervisors and Administrators grades 6 to 12. Classes will cover events such as Get Your Bearing, Road Rally, Weather, Heat Transfer, Physics Lab, The Scrambler, The Mousetrap Car, Rocks and Fossils, Astronomy, Science Crime Busters, Chemistry Lab, Measurement, Designer Genes, Water Quality, Its about Time and more plus New Events for 93. Also learn how to build a team and gain support for your science program. **The Leelanau Environmental School** is located along the Sleeping Bear Dunes National Park nestled among the hills of northern Michigan with dorms a short walk away from the sandy shoreline of Lake Michigan. The grounds include tennis courts, astronomical observatory and canoeing on the Crystal River. Housing is in double occupancy dorm rooms that share a bath between rooms. Linens are provided for beds. Meals are served cafeteria style with a variety of excellent offerings. **The Nature Place** is in the mountains near Pikes Peak and 35 miles outside of Colorado Springs with facilities that include a pool, jacuzzi, exercise room, tennis and volleyball courts. Rooms are motel style with twin beds. All rooms are double occupancy with linens provided. Meals are served in the lodge on the grounds. **The Florida Institute of Technology** will provide an opportunity for a special Atlantic Ocean Field Trip and a behind the scenes tour of the Kennedy Space Center. Housing includes campus dorms or apartments or off campus area motels. A meal package will be offered.

Registration of \$190 includes 4 days of instruction, manuals, changes for next year, classroom materials and activities that will help you meet your state's core curriculum science objectives. Many Science Olympiad coaches at the national finals attribute their success to tips learned at the Science Olympiad Summer Institutes.

**REGISTRATION FORM**

NAME \_\_\_\_\_ SCHOOL \_\_\_\_\_  
HOME ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_  
SCHOOL PHONE \_\_\_\_\_ HOME PHONE \_\_\_\_\_

REGISTRATION FOR COURSE:	\$190	_____	190
HOUSING: (CHECK THE INSTITUTE YOU CHOOSE AND TOTAL THE FEES ON BOTTOM)			
__LEELANAU:	DOUBLE OCCUPANCY	\$190	_____
	SINGLE OCCUPANCY	\$250	_____
	COMMUTER*	\$120	_____
__NATURE PLACE:	DOUBLE OCCUPANCY	\$350	_____
	COMMUTER*	\$190	_____
	SPOUSE/CHILD(5-15)	\$300/220	_____
__FL. INST. OF TECH -	DOUBLE OCCUPANCY(DORM)	\$175	_____
	SINGLE OCCUPANCY(DORM)	\$225	_____
	APARTMENT(FAMILY)	\$265	_____
	(plus meal package per person)	\$80 X _____ =	_____
	COMMUTER*	\$115	_____
__JOHNSTOWN, PA	COSTS TO BE ANNOUNCED BY MARCH 1, 1992		_____
	<b>TOTAL</b>		_____

\*Commuter fee covers facilities use and meals.

Return Form to: Science Olympiad, 5955 Little Pine Lane. Rochester, MI 48306 313-651-4013

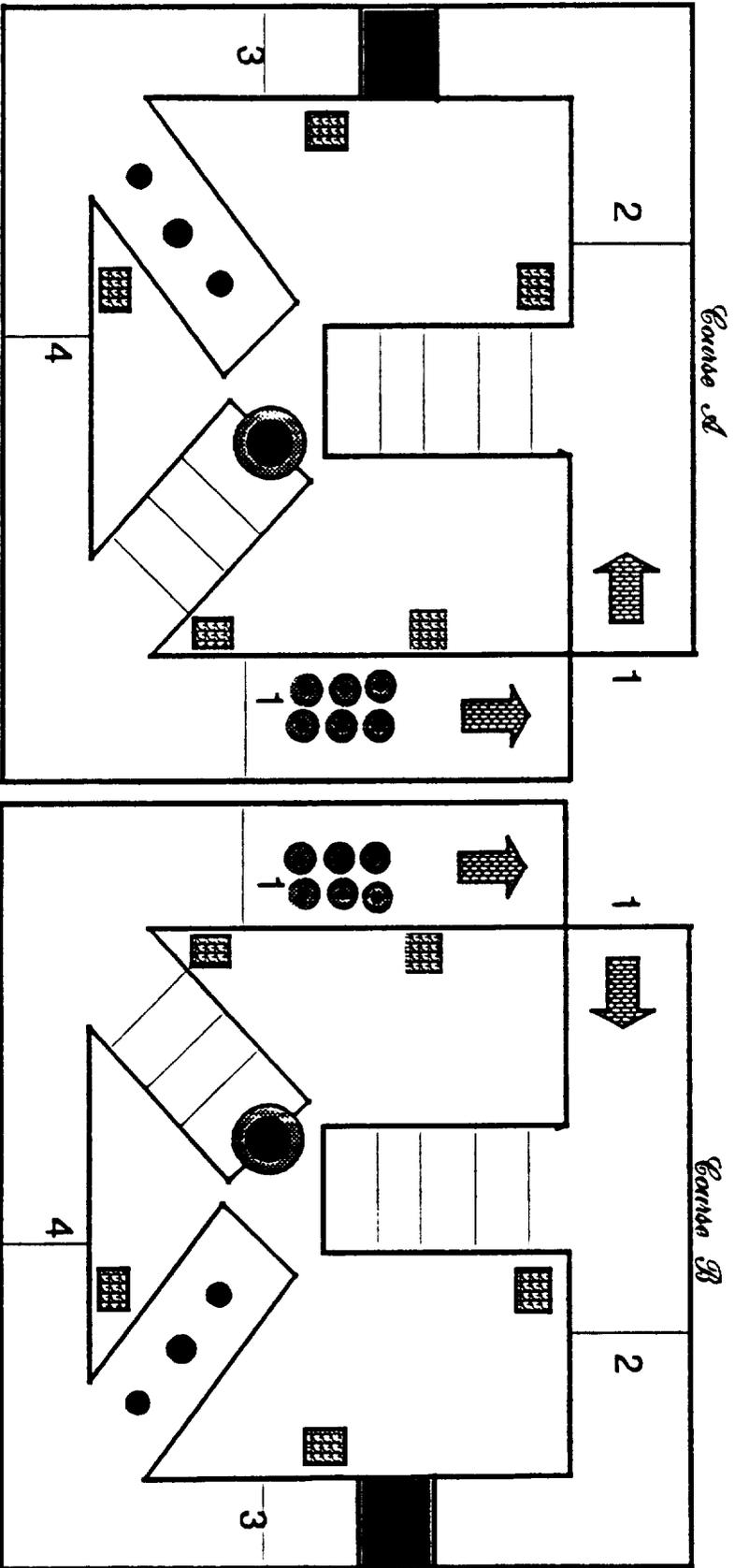
A \$50.00 deposit will hold a place at the Institute of your choice. Total amount due 30 days before institute begins.

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# 1992 National Science Olympiad - Pentathlon

## Auburn University



- 1. Team member 1 - First Objective
- 2. Team member 2 - Second Objective
- 3. Team member 3 - Third Objective
- 4. Team member 4 - Fourth Objective
- 5. Team member 5 - Fifth Objective

- Physics
- Chemistry
- Biology
- Environmental Science
- Space Science

*This year's Pentathlon will be run as a relay.*

*Each team will have four team members consisting of two females and two males.  
Team members will be placed on the course before time is started.*

*Water balloons cannot be put down at any time nor held inside of clothing or any container.  
The balloon must be passed to the next teammate at each table before competition can continue. If balloon is dropped, it must be picked up immediately before continuing the task. If balloon breaks, runner must return to start and get another balloon, then return to spot at which balloon broke.*

**Team member 1 - Starts**

***First Obstacle: Frisbee Toss / Physics***

*#1 is given balloon and must wait at the start for the signal to begin. Time starts.*

*Runs to toss line and aims frisbee through the hoop. If unsuccessful, fetches frisbee and moves up to new marker for next attempt until frisbee makes it through the hoop.*

*Goes to question table. Is given three attempts to answer questions. Passes balloon to #2.*

*Goes to obstacle 5 and waits.*

**Team member 2 - at question table "A"**

***Second Obstacle: Long Jump / Chemistry***

*#2 receives balloon at table and goes to jump marker.*

*Toes must be behind line at start of jump and heels must be past second marker at finish. Failed attempt must be repeated.*

*Goes to question table "B". Is given three attempts to answer questions. Passes balloon to #3.*

**Team member 3 - at question table "B"**

***Third Obstacle: Soccer Dribble / Biology***

*#3 receives balloon at table and proceeds to pylons.*

*Places ball on ground and dribbles in an "S" pattern around pylons with feet to end of line and back. Deposits soccer ball back in container. Failed attempts must be repeated.*

*Goes to question table "C" and is given three attempts to answer questions then passes balloon to #4.*

**Team member 4 - at question table "C"**

***Fourth Obstacle: Bean Bag Toss / Environmental Science***

*#4 receives balloon at table and goes to starting line for Bean Bag Toss.*

*Picks up bag and aims for hoop target. (Bag must remain in hoop to be counted). If unsuccessful, retrieve bag and move forward to next marker.*

*Goes to question table "D" and is given three attempts to answer questions. Passes balloon to #1.*

**Team member 1 - at question table "D"**

***Fifth Obstacle: Tires / Earth & Space Science***

*#1 receives balloon at table and goes to start of tires. Each tire must be hit. A miss means a restart of the task.*

*Goes to question table three and is given three attempts to answer questions then runs through finish line. Time ends.*



## ATTENTION TEACHERS

Just For You

Friday, May 15, 1992

**What:** Redeem your coupon for a 1992 Science Olympiad Designer T-Shirt  
**Where:** Auburn University Bookstore - Ground floor of Haley Center  
**When:** All Day

**What:** Lunar Sample Workshop  
**Where:** 118 Petrie Hall  
**When:** 10:00 AM - 12:00 Noon and 1:30 PM - 3:30 PM

**What:** NASA - Mobile Teacher Resource Center  
**Where:** LASER Van, North of the War Eagle Aviary, South of Haley Center  
**When:** 10:00 AM - 12:00 Noon and 1:30 PM - 3:30 PM

**What:** School of Human Sciences Coffee/Idea Exchange  
**Where:** 224 Spidle Hall  
**When:** 11:00 AM - 12:00 Noon

**What:** E. V. E. (Environmental Visionary Effort) Information Exchange  
**Where:** 203 Foy Union Building  
**When:** 11:00 AM and 1:30 PM

**What:** Exhibits  
**Where:** Foy Union Lobby  
**When:** All Day

Saturday, May 16, 1992

**What:** Redeem your coupon for a 1992 Science Olympiad Designer T-Shirt  
**Where:** Auburn University Bookstore - Ground floor of Haley Center  
**When:** All Day

**What:** NASA - Mobile Teacher Resource Center  
**Where:** LASER Van, North of the War Eagle Aviary, South of Haley Center  
**When:** 10:00 AM - 12:00 Noon and 1:30 PM - 3:30 PM

**What:** Hospitality Room Hosted by Auburn University  
Coffee and doughnuts, Sandwich Buffet, Fruit, Soft Drinks  
**Where:** 108 Foy Union Building  
**When:** 9:00 AM - 4:00 PM

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# Schedule of Events

## Division C (Grades 9-12)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 201	Team # 1-25 CY 201	Team # 26-50 CY 201					
Balancing Equations Chemistry Building 151			All Teams CB 151				
Bio-Process Lab Cary Hall 217					Team # 1-25 CY 217	Team # 26-50 CY 217	
Cell Biology Funchess Hall 208				Team #18-34 FS 208	Team # 1-17 FS 208	Team # 35-50 FS 208	
Chemistry Lab Saunders Lab 224	Team # 1-17 SN 224	Team # 18-34 SN 224	Team # 35-50 SN 224				
Circuit Lab Parker Hall 114/118		Team # 35-50 PKH 114/118	Team #18-34 PKH 114/118	Team # 1-17 PKH 114/118			
Computer Programming Tichenor Hall 203		Team # 1-25 TR 203	Team # 26-50 TR 203				
Designer Genes Cary Hall 136				All Teams CY 136			
Don't Bug Me Funchess Hall 203	Team # 26-50 FS 203	Team # 1-25 FS 203					
It's About Time Saunders Lab 212				Team # 26-50 SN 212		Team # 1-25 SN 212	
Measurement Parker Hall 120/122					Team #26-50 PKH 120/122	Team # 1-25 PKH 120/122	
Metric Estimation Saunders Lab 324				Team # 1-25 SN 324	Team # 26-50 SN 324		
Physics Lab Parker Hall 100/102			Team # 35-50 PKH 100/102	Team # 1-17 PKH 100/102	Team # 18-34 PKH 100/102		
Qualitative Analysis Saunders Lab 216	Team # 26-50 SN 216		Team # 1-25 SN 216				
Road Rally Haley Center 2406	Team # 1-25 HC 2406		Team # 26-50 HC 2406				
Rocks, Minerals & Fossils Haley Center 2174/2169					Team # 1-25 HC2174/2169	Team # 26-50 HC2174/2169	
Science Bowl Haley Center 2370				Team # 19-36 HC 2370	Team # 37-50 HC2370	Team # 1-18 HC2370	Semi-finals & Finals
Sounds of Music Goodwin Music Hall 102/105/134	Team # 43-50 GB 102	Team # 10-18 GB 102	Team # 1-9 GB 102	Team # 35-42 GB 102	Team # 19-26 GB 102	Team # 27-34 GB 102	
Write It/Do It Saunders Lab 300/306	Team # 1-25 SN 300/306	Team # 26-50 SN 300/306					

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Get Your Bearings South End of Duncan Drive	All Teams Wooded Area at South End of Duncan Drive						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Scrambler Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, West Concourse						

SPECIAL/DEMO EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab; Room 314	All Teams Saunders Lab; Room 314						



## MEAL INFORMATION

Attached are copies of the On-Campus meal and Saturday Banquet information sheets. You may purchase meal tickets at registration. Breakfast and lunch tickets may also be purchased at the Cafeterias on-campus.

If you sent in a check for your meal tickets and did not receive them in the mail, check at the registration desk.

Remember that everyone is our guest for dinner Friday night. In order to avoid long lines, we ask that Division C teams go to Terrell Dinning Hall and Division B teams go to War Eagle Cafeteria for dinner. In addition, it would be helpful if teams 1-24 would try to go to dinner between 4:00 - 5:00 p.m. and teams 25 - 48 would eat between 5:00 - 6:00 p.m. if at all possible.

### Cafeteria Schedule for Meal Tickets and Banquets:

Meal	Location	Time
<b>Friday, May 16</b>		
Breakfast	Terrell Dining Hall & War Eagle Cafeteria	7:00 a.m. - 9:30 a.m.
Lunch	Terrell Dining Hall & War Eagle Cafeteria	10:30 a.m. - 1:30 p.m.
Dinner	Terrell Dining Hall & War Eagle Cafeteria	4:00 p.m. - 6:30 p.m.
<b>Saturday, May 16</b>		
Breakfast	Terrell Dining Hall & War Eagle Cafeteria	7:00 a.m. - 9:30 a.m.
Lunch	War Eagle Cafeteria and Take Ten Burgers & Fries	10:30 a.m. - 1:30 p.m.
Banquet	Foy Union Ball Room	4:30 p.m. - 7:30 p.m.
	AU Hotel & Conf. Center	4:30 p.m. - 7:30 p.m.
<b>Sunday, May 17</b>		
Breakfast	Terrell Dining Hall	7:00 a.m. - 9:30 a.m.



## On-Campus Meal Ticket Information

We have made special arrangement with the Auburn University Food Services so that you may purchase individual breakfast, lunch and dinner meal tickets to be used during your stay in Auburn. Each meal ticket will be "all you can eat" (see reverse side for meal menus).

For each 15 breakfast, 15 lunch or 15 dinner tickets you purchase, you will receive one free ticket of the same type. In order for food services to be prepared for the large number of additional people on campus, we request that you order your meals ahead of time. In determining how many meal tickets you need, keep in mind that everyone will be the guest of Auburn University for dinner Friday night.

All food services on campus will be open during the Olympiad. In addition to traditional cafeterias, we have snack bars, fast food restaurants, deli & convenience stores and a fine dining restaurant. All locations will serve Olympiad participants on an a la carte, cash basis. Of course, the a la carte service will not be "all you can eat".

To purchase meal tickets, please fill out the following information and return this form along with a check to:

W.D. Perry  
 National Science Olympiad  
 Department of Chemistry  
 Auburn University  
 Auburn, AL 36849

The check should be made out to "Auburn University National Science Olympiad". Please understand that we cannot accept purchase orders.

Tickets will be mailed to you. However, extra tickets may be purchased at registration on May 15.

Meal	Price per Meal (including tax)	Number of Tickets Wanted	Number of Free Tickets	Amount
Breakfast	\$4.30			
Lunch	\$5.38			
Dinner	\$5.38			

Total Amount =

Teacher/Coach: \_\_\_\_\_

School: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Team Number: \_\_\_\_\_

Division: \_\_\_\_\_

(OVER)

OFFICE OF THE  
 NATIONAL SCIENCE OLYMPIAD

ORIGINAL COPY IS  
 OF POOR QUALITY

## Meal Ticket Menu

**Dinner Thursday, May 14, 1992 (4:30-6:30 pm)**  
Location: War Eagle Cafeteria & Terrell Cafeteria

Menu	
Lasagna	Country Fried Steak
Tossed Salad	Mashed Potatoes
Broccoli	Corn
Rolls	Corn Bread
Assorted Desserts	Soft Drink, Tea, Coffee

**Breakfast Friday, May 15, 1992 (7:00-9:30 am)**  
Location: War Eagle Cafeteria & Terrell Cafeteria

Menu	
Eggs (fried or scrambled)	
Biscuits	Juice
Toast	Coffee
Grits	Soft Drinks
Sausage	Bacon
Hash Browns	Muffins

**Lunch Friday, May 15, 1992 (10:30-1:30 pm)**  
Location: War Eagle Cafeteria & Terrell Cafeteria

Menu	
Shrimp	Sloppy Joe
Macaroni & Cheese	Green Peas
Rolls	Tea
Assorted Desserts	Soft Drink

**Dinner Friday, May 15, 1992 (4:30-6:30 pm)**  
Location: Terrell Cafeteria

Dinner provided by College of Sciences & Mathematics, Auburn University.

**Breakfast Saturday, May 16, 1992 (7:00-9:30 am)**  
Location: War Eagle Cafeteria & Terrell Cafeteria

Menu	
Eggs (fried or scrambled)	
Biscuits	Juice
Toast	Coffee
Grits	Soft Drinks
Sausage	Bacon
Hash Browns	Muffins

**Lunch Saturday, May 16, 1992 (10:30-1:30 pm)**  
Location: War Eagle Cafeteria & Take Ten

Menu	
Qtr pound Hamburgers	French Fries
Qtr pound Cheeseburgers	Tossed Salad
Hoagie Sandwiches	Assorted Desserts
Soft Drinks, Tea, Lemonade	

## Saturday Banquet Ticket Information

It is our understanding that most teams like to do a little celebrating Saturday night after the competition and it is our observation that one of the more popular methods of celebrating is to dine in a relatively nice atmosphere.

Due to the fact that the competition will last until 3:30 pm for all teams, until 4:30 pm for teams that make it into the final round of the Science Bowl, and the awards ceremony starts at 6:00 and 6:30 pm respectively for Division 3 and 4, we are concerned about the ability of approximately 2,000 people to find a suitable eating establishment and make it to the awards ceremony on time.

For these reason we have made arrangements for two different establishments to serve a semi-formal banquet buffet dinner Saturday evening. The menu for each establishment is listed on the reverse side. Dinner will be served from 4:30 pm to 7:30 pm.

To purchase Saturday banquet tickets, please fill out the following information and return this form along with a check to:

W.D. Perry  
National Science Olympiad  
Department of Chemistry  
Auburn University  
Auburn, AL 36849

The check should be made out to "Auburn University National Science Olympiad". Please understand that we cannot accept purchase orders.

Tickets will be mailed to you. However, extra tickets may be purchased at registration on May 15. For dinner in the Foy Union Ballroom, tickets may also be purchased at the door Saturday night.

### Saturday Buffet Banquet (May 16)

Establishment	Price per Meal (including tax)	Number of Tickets Wanted	Total Amount
Foy Union Ballroom on Auburn Campus	\$10.70		
Foy Union Ballroom on Auburn Campus*	\$6.40		
AU Hotel and Conference Center	\$14.84		

\* Children under 12 years old with adult (one adult per child, 6 oz prime rib for under 12 meal)

Teacher/Coach: \_\_\_\_\_

School: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Team Number: \_\_\_\_\_

Division: \_\_\_\_\_

OVER  
COURTESY OF  
COLLEGE PHOTOGRAPH

OFFICE OF THE  
STATE SUPERVISOR OF POLICE

Buffet Dinner Menu

Saturday, May 10, 1991 (5:30-7:30 pm)

Location:  
Boy Union Ballroom on Auburn Campus (This is not an "all you can eat" buffet)

Menu

- 6 oz Prime Rib
- Baked Potato
- Green Bean Casserole
- Salad Bar (all you can eat)
- Apple Cobbler (all you can eat)
- Rolls
- Iced Tea & Coffee

Location:  
AU Hotel and Conference Center (This is not an "all you can eat" buffet)

Menu

- Main Course (select one)
  - Tortellini Alfredo
  - Oriental Pepper Beef
  - Baked Chicken, Supreme Sauce
- Rice Pilaf
- Buttered Golden Corn
- Green Beans Almandine
- Salads (select one)
  - Fresh Tossed Salad
  - Cole Slaw
  - Potato Salad
  - Fruit Salad
- Assorted Deserts (select one)
  - Chocolate Cake
  - Apple Pie
  - Cherry Pie
  - Banana Nut Cake
  - Lemon Cake
  - German Chocolate Cake
  - Pecan Pie
- Rolls and Butter
- Ice Tea & Lemonade

CHECK  
IT  
OUT  
EXHIBITS  
AND  
DISPLAYS

FOY UNION BUILDING

FRIDAY AND SATURDAY



## **Appendix G**

One-day-early events on the AU campus Friday May 15, 1992



SCIENCE OLYMPIAD NATIONAL TOURNAMENT

AUBURN UNIVERSITY

ACTIVITIES IN THE VARIOUS SCHOOLS AND COLLEGES

FRIDAY, MAY 15, 1992

10:00 AM -3:30 PM

ACTIVITY ORDER LIST

In the "Spaces Requested" section, indicate the number of tickets you would like to have for your school. Present this order list at the "Activity Registration Table". Ticket orders will be filled on a first come first served basis. The "Activity Registration Table" at the AU Conference Center will be open from 9:00 AM - 1:00 PM Friday, May 15, 1992.

We hope you and your students enjoy the day!

Activity #	Brief Title	Time	Spaces Available	Spaces Requested
1	Showcase of Agricultural Research	1:30	125	
2	Display of student work	10:00 AM	75	
		11:00 AM	75	
		1:30 PM	75	
		2:30 PM	75	
3	Meet the Dean of Business	10:00 AM	150	
4	Departments in College of Business	11:00 AM	145	
5	Advisors of College of Business	1:30 PM	200	
6	Become a Science Teacher	11:00 AM	20	
		2:30 PM	20	
7	Wind Tunnel	10:00 AM	15	
		1:30 PM	15	
8	Chemical Engineering Materials	10:00 AM	10	
		11:00 AM	10	
		1:30 PM	10	
		2:30 PM	10	
9	Digital Logic Circuits	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	
10	Industrial Engineering	10:00 AM	20	
		11:00 AM	20	
		1:30 PM	20	
		2:30 PM	20	
11	Bullet Resistant Material	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	

12	Polymer Identification	10:00 AM	10	
		11:00 AM	10	
		1:30 PM	10	
		2:30 PM	10	
13	Forest Ecology	10:00 AM	8	
14	Geographic Information Systems	2:30 PM	10	
15	Computer Graphics and Wood Science	10:00 AM	10	
		11:00 AM	10	
16	Wood as an Engineering Material	10:00 AM	10	
17	Nutrition and Exercise	11:00 AM	10	
18	Careers in Hotel Management	2:30 PM	20	
19	Be a "Green Consumer"	10:00 AM	15	
		1:30 PM	15	
20	Barrier Textile Systems	10:00 AM	20	
		2:30 PM	20	
21	Science Behind the Candy Bar	10:00 AM	20	
		1:30 PM	20	
22	TC <sup>2</sup> Interactive Video	11:00 AM	20	
		1:30 PM	20	
23	Learn Russian by Computer	1:30 PM	15	
24	Geographic Information System	10:00 AM	8	
25	Acoustics of Speech	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	
26	Social Science - Mystery Fossil	10:00 AM	35	
	Social Science - Population Growth	11:00 AM	35	
	Social Science - Status of Women	1:30 PM	35	
	Social Science - Save the World	2:30 PM	35	
27	Medical/Surgical Nursing	10:00 AM	3	
28	Fundamentally Fun Graphics	10:00 AM	20	
		1:30 PM	20	
29	Drug Development in Micro-Gravity	10:00 AM	20	
		1:30 PM	20	
30	Magnetic Fusion in a Magnetic Bottle	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	
31	Space Physics	10:00 AM	20	
		11:00 AM	20	
		1:30 PM	20	
		2:30 PM	20	
32	Superconductivity	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	

33	High Power Microscopy	10:00 AM	15	
		11:00 AM	15	
		1:30 PM	15	
		2:30 PM	15	
34	Electron Microscopy	10:00 AM	12	
		11:00 AM	12	
		1:30 PM	12	
		2:30 PM	12	
35	Chemical Demonstrations	2:30 PM	200	
36	Seismic Refraction	10:00 AM	15	
		1:30 PM	15	
37	The Geothermal Connection	10:00 AM	45	
		11:00 AM	45	
38	Reptiles and Amphibians of the SE	10:00 AM	25	
		11:00 AM	25	
		1:30 PM	25	
		2:30 PM	25	
39	Dynamical Systems and Mathematics	10:00 AM	15	
40	Cell Science Center	10:00 AM	20	
		11:00 AM	20	
41	Electron Microscopy Center	1:30 PM	30	
		2:30 PM	30	
42	College of Veterinary Medicine	10:00 AM	80	
43	Star Trek VI:	9:00 AM	300	
	The Undiscovered Country	1:00 PM	300	
	The	11:00 AM	300	
	Adams Family	3:00 PM	300	

SCIENCE OLYMPIAD NATIONAL TOURNAMENT

AUBURN UNIVERSITY

ACTIVITIES IN THE VARIOUS SCHOOLS AND COLLEGES

FRIDAY, MAY 15, 1992

10:00 AM - 3:30 PM

Shown below you will find a description of numerous different activities which will be conducted by the various schools and colleges of Auburn University on Friday, May 15, 1992. Each activity lists a descriptive title, time(s) the activity is available, location of the activity, person(s) conducting the activity, number of students that can be accommodated at each session and what the students will see and/or do during that activity.

We would like to suggest the following procedure:

1. Have your students scan the activities list and decide how they wish to spend their time Friday.
2. Fill out the attached activity order list for your entire team and bring it to the activity registration table at The Auburn University Hotel and Conference Center (9:00 AM - 1:00 PM Friday, May 15, 1992). One person per school should plan to do the registration.
3. We will issue tickets for the activities on a first come first served basis. For the convenience of your students, the tickets will contain pertinent event information (e.g. activity title, location and time).
4. Students attend the activities for which they have tickets.

Note: We have considered numerous ways to accomplish the activities registration and the procedure outlined above appears to be the least cumbersome. Our objective is to provide the students with some positive educational experiences and we feel that with your help and understanding at the activity registration desk we can accomplish this.

**Just A Reminder**

Don't forget about the special Olympiad Events which are also being offered Friday. These events are listed below:

A mission To Planet Earth  
A NASA and U.S. Space and Rocket Center Sponsored Special Event

The top Junior and Senior High School team and one of their teachers will win scholarships to Space Camp. See your information packet for details.

**School of Agriculture**

Activity: 1

Title: Showcase of Agricultural/Food Science Research Systems in Auburn University's College of Agriculture.

When: 1:30 PM - 3:30 PM  
Where: Comer Hall Auditorium  
Who: Hosted by Deans Bob Voitle and Bill Alverson and featuring seven teacher/scientists directly involved in the latest high technology of agriculture and food science.  
Number: 125  
What: A total of seven 15 minute presentations featuring Microscopes in Science (including electron microscopy); Genetic Engineering in Cultured Fish (including growth hormone research); The Tall Fescue Endophyte Story (how Auburn's research solved problems with grazing animal disorders); Applying Engineering to Biological Resources (biotechnology and environmental issues that offer exciting career opportunities); Using Growth Regulators to Control Growth and Flowering of Plants (will include invitro propagation); Entomology in A Changing Agriculture (influence of current technology in insect management); and AU LEAN - Food for Tomorrow (scientific basis for the development of AU LEAN beef and pork products - with samples!).

### School of Architecture

Activity: 2  
Title: Display of Student Work  
When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM  
Where: Dudley Hall Courtyard, weather permitting, or first floor of Dudley Hall  
Who: Ms. Betty Fendley  
Number: 75/session  
What: The School of Architecture at Auburn University has programs in architecture, building science, industrial design, interior design and landscape architecture. Exhibits of student work will be on display in the hallways of Dudley Hall. Upper division students will act as hosts as visitors tour project rooms, displays, and computer facilities.

### College of Business

Activity: 3  
Title: Meet Dean Danny Bellenger for a Welcome and Slide Presentation on the College of Business.  
When: 10:00 AM - 10:50 AM  
Where: 239 Broun Hall Auditorium  
Who: Dean Danny Bellenger  
Number: 150  
What: Slide presentation which will include pictures of the new \$15 million college of Business building

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Activity: 4

Title: Get to Know the Departments in the College of Business--Accounting, Economics, Finance, Management and Marketing & Transportation

When: 11:00 AM - 12:00 Noon

Where: 1203 Haley Center Auditorium

Who: Accounting - Dr. Minyard, Economics - Dr. Gropper, Finance - Dr. Page Management - Dr. Sutton, Marketing & Transportation - Dr. Butler

Number: 145

What: Each department representative will discuss what makes their field exciting, job opportunities available in their areas, and interesting facts about the department.

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Activity: 5

Title: Meet Academic Advisors in the College of Business to informally discuss admission and curriculum requirements.

When: 1:30 PM - 2:20 PM

Where: 215 Thach Hall

Who: Mrs. Huggins, Mrs. Owsley, Mrs. Sculthrope, and Mrs. Wilke

Number: 200

What: Open Session to drop by and discuss admission and curriculum requirements for the College of Business.

<b>College of Education</b>
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Activity: 6

Title: So You're Thinking About Becoming a Science or Mathematics Teacher!!

When: 11:00 AM - 12:00 Noon  
2:30 PM - 3:30 PM

Where: 2462 Haley Center

Who: Drs. Baird, Easterday, Kamen, Rowsey and Swetman

Number: 20/session

What: Meet Science and Mathematics education students and faculty and share in the excitement of teaching science and mathematics in the 1990's. We'll have a snack and take part in some interesting activities.

Activity: 7

Title: Low Speed Wind Tunnels

When: 10:00 AM - 10:50 AM  
1:30 PM - 2:20 PM

Where: "L" Building - entrance to wind tunnel - sign above door

Who: Dr. Donald Spring

Number: 15/session

What: You will operate the tunnel with a model in it and discuss, briefly, the use of wind tunnel test results for predicting the loads on a full scale prototype airplane.

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Activity: 8

Title: Chemical Engineering Materials Used in the Environment

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 312 Ross Engineering Lab

Who: Dr. Bruce Tatarchuk

Number: 10/session

What: Chemical engineering materials in space, novel electric car battery systems, environmental control, "robotics" in the production of chemicals, paper and plastic.

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Activity: 9

Title: Digital Logic Circuit Design Lab

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 356 Broun Hall

Who: Dr. Victor P. Nelson

Number: 15/session

What: Students will receive a brief overview of digital logic circuit design, after which each will construct and test a circuit to control a set of light emitting diodes (LED's) so that they operate as the left and right turn signals of the old Ford Thunderbird tail-lights. The circuit will be constructed on the prototype breadboards of the Digital Logic Design Lab.

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Activity: 10

Title: Problems Facing Industrial Engineers in a Modern Manufacturing Environment

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 205A Dunstan Hall

Who: Dr. Alisha Waller

Number: 20/session

What: We will consider the uses of mathematics in solving bin packing problems found in modern manufacturing environments. We will solve specific examples to gain insight for generating an algorithm for the general problem.

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Activity: 11

Title: Bullet Resistant Material

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 120 Wilmore Engineering Labs

Who: Dr. Bryan Chin

Number: 15/session

What: Students will be given three materials. The objective is to select the material that they would stand behind if someone were shooting at them. Lab assistants will help perform quick tests to make the choice. Choose the right tests and make the right decision. After you have chosen, fracture the three specimens and see if you were right. Then compare the broken materials using a Scanning Electron Microscope.

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Activity: 12

Title: Multicolor Fabric Dyeing for Polymer Identification

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: Main lobby of the Textile Engineering Building

Who: Ms. Ida Reed

Number: 10/session

What: Students will identify an unknown fabric by the color that it becomes in several mixed dyebaths. Students will be tested for color blindness using the Macbeth Spectralight.

**School of Forestry**

Activity: 13

Title: Forest Ecology and the Environment

When: 10:00 AM - 12:00 Noon

Where: M. White Smith Hall -- see host at front door

Who: Drs. Gjerstad, Mitchell, Jones, Pu Somers, and Lockaby

Number: 8

What: Participants will visit nearby field research installations. At one, sophisticated instruments are being used to measure plant root growth, soil moisture depletion and rates of photosynthesis. At another, an innovative approach to study the effects of simulated global warming on forest litter decomposition is demonstrated. Then, indoors, computer models will be used to simulate and develop better understanding of behavior of such natural systems.

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Activity: 14

Title: Geographic Information Systems - Applications in Forestry and Natural Resources.

When: 2:30 PM - 3:20 PM

Where: M. White Smith Hall -- see host at front door

Who: Drs. Teeter, Brinker, Prasanna and Matthews

Number: 10

What: Students will digitize analog map information into a GIS database. They will then perform map overlay functions to determine area of map attribute intersection. Students will also see satellite imagery and perform some limited image analysis.

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Activity: 15

Title: Computer Graphics and Wood Science

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon

Where: M. White Smith Hall -- see host at front door

Who: Dr. Tom Elder

Number: 10

What: Participants will use computer graphics to construct and examine the chemical components of wood, their size, shape, flexibility and chemical reactivity.

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Activity: 16

Title: Wood As An Engineering material

When: 10:00 AM- 10:50 AM

Where: Forest Products Lab -- consult your campus map -- while this lab is on campus, it is quite a distance from the center of the campus.

Who: Drs. Tang and Carino

Number: 10

What: This presentation will include: 1) A color slide presentation on wood as an engineering material; 2) A wood products exhibit; 3) 3-D views of wood structures: gross features microscopic observation of wood structure, scanning electron microscopic photos; 4) Computer simulation of forest products management: raw logs to lumber.

### School of Human Sciences

Activity: 17

Title: Relationships Between Proper Nutrition and Exercise Performance

When: 11:00 AM - 12:00 Noon

Where: 344 Spidle Hall

Who: Dr. Robert Keith

Number: 10

What: Tour of laboratory showing instruments and equipment used. Brief talk using models on exercise and dehydration and dietary intakes using computer software analysis.

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Activity: 18

Title: A Fast-Moving Seminar About Careers in Hotel, Resort & Club Management.

When: 2:30 PM - 3:30 PM

Where: Lobby of the Auburn University Hotel & Conference Center

Who: Dr. Bill Kent

Number: 20

What: This seminar and tour will provide insight into potential careers in Hotel, Resort and Club Management. A brief tour of the Auburn University Hotel and Conference Center will include a look at "behind the scenes". A video on the world-class Ritz-Carlton Hotel Company is also featured.

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Activity: 19

Title: Be a "Green Consumer": Spaceship Earth in the 21st Century

When: 10:00 AM - 10:50 AM  
1:30 PM - 2:20 PM

Where: 386A Spidle Hall

Who: Dr. Paulette Hill and Dr. Cathy Solheim

Number: 15/session

What: What we buy, how we use it, and how we dispose of it are important to being environmentally responsible consumers. Participate in a survey and learn about environmentally sound products, "green" advertising, and responsible practices we all must use to do our part in protecting our planet.

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Activity: 20

Title: Demonstration of Barrier Textile Systems: Protective Garment Design and Engineering for Military Pilots

When: 10:00 AM - 10:50 AM  
2:30 PM - 3:30 PM

Where: 244 Spidle Hall

Who: Dr. Lisa Christman-Shanley

Number: 20/session

What: You are a pilot and your plane goes down in frigid Arctic water. Without a protective flightsuit, you could die in minutes. What technology, engineering, and design concepts are currently being tested in the development of protective garments for astronauts, pilots, soldiers and others. Participate in this demonstration and see.

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Activity: 21

Title: The Science Behind the Candy Bar

When: 10:00 AM - 10:50 AM  
1:30 PM - 2:20 PM

Where: 238 Spidle Hall

Who: Dr. Jean Olds

Number: 20/session

What: Procedures used in the Food industry to produce such foods as candy bars and jellies. The advanced technology and science behind every food product on the shelf in the grocery store.

Students will be able to experience a sensory evaluation test, like the ones used by such companies as Coca-Cola, M&M, Mars, and Nestles Chocolate.

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Activity: 22

Title: TC<sup>2</sup> Interactive Video (computer/video) demonstration

When: 11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM

Where: 244 Spidle Hall

Who: Dr. Lenda Jo Anderson

Number: 20/session

What: The TC<sup>2</sup> Interactive Video program is a unique, state of the art tool used in preparing students for careers in product development, design specification, and engineering of apparel products. Students will participate in a demonstration of this as well as tour the nationally unique, fully equipped apparel production management laboratory during the presentation. Contemporary career opportunities will be presented.

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**College of Liberal Arts**

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Activity: 23

Title: Learn to Read Russian by Computer

When: 1:30 PM - 3:30 PM

Where: 3350 Haley Center

Who: Dr. George Mitrevski

Number: 15

What: Russian Hyper Tutor, a computer program, will teach students the Russian alphabet and how to read Russian. The program is interactive and it incorporates digitized sound and graphics.

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Activity: 24

Title: Geographic Information System Demonstration

When: 10:00 AM - 10:50 AM

Where: 2198 Haley Center

Who: Dr. Sonny Dawsey

Number: 8

What: Demonstration of Geographic Information System hardware and software in resource management and land use planning activities.

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Activity: 25

Title: Instrument Demonstration on Acoustics of Speech

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 1239 Haley Center - Communication Sciences Laboratory

Who: Faculty and graduate students of the Department of Communication Disorders

Number: 15/session

What: Discussion/demonstration on how speech is analyzed acoustically. Various types of instruments will be presented, including the sound spectrograph (for making "voice prints"), Visi-Pitch, and the Computerized Speech Laboratory. Also, instrumentation for measuring brain wave activity related to speech and language will be shown.

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Activity: 26

Title: Social Science Computer Lab

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 3223 Haley Center

Who: Dr. James H. Gundlach

Number: 35/session

What: 10:00 AM - Mystery Fossil: This exercise uses computerized pictures and data on eight human skeletons to examine the evolution of the human brain and jaw.

11:00 AM - Population Growth: Students examine population growth in different regions of the world. They also see how fast the world is growing and identify that different birth rates are the primary factor in world population growth.

1:30 PM - Status of Women: Students gather data on the status of women and fertility for 25 countries. They then use this data to evaluate the hypothesis that changing the status of women is central to bringing the population explosion under control.

2:30 PM - Save the World: Students simulate three different approaches to improving the world by year 2035. The approaches include reducing birth rates, adopting a soft energy approach and a combination of the two. They see how these changes would affect such factors as starvation, global warming, quality of life, and bio-diversity.

## School of Nursing

Activity: 27

Title: Medical/Surgical Nursing: Observation in the clinical setting with a senior nursing student.

When: 10:00 AM - 12:00 Noon  
1:30 PM - 3:30 PM

Where: Miller Hall Lobby - to be transported to East Alabama Medical Center

Who: Dr. Charlotte Pitts

Number: 3/session

What: Each student will be paired with a senior nursing student doing a preceptorship at East Alabama Medical Center to observe nursing care in various specialty areas such as Medical or Surgical ICU Critical Care, Telemetry and Emergency Room.

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Activity: 28

Title: Fundamentally Fun Graphics: Simulated skills practice using software for nursing education.

When: 10:00 AM - 12:00 Noon  
1:30 PM - 3:30 PM

Where: 226 Miller Hall

Who: Mrs. Kathy Jo Ellison

Number: 20/session

What: Students will learn various nursing skills on the computer using software for nursing education. Skills include: filling syringes, pouring medications, setting IV drip rates, reading thermometers and taking blood pressures.

## School of Pharmacy

Activity: 29

Title: Drug Development in a Micro-Gravity Environment

When: 10:00 AM - 10:50 AM  
1:30 PM - 2:20 PM

Where: 101B Pharmacy Building

Who: Dr. Jack DeRuiter and Dr. Howard Einsphahr

Number: 20/session

What: The importance of a micro-gravity environment to the development of certain types of drugs will be demonstrated using a protein crystal growth aboard the space shuttle. A summary of "where we are" and "where we go from here" will be presented.

Activity: 30

Title: Magnetic Fusion in a Magnetic Bottle

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: Nuclear Science Center Enter main Lobby and go to front desk

Who: Dr. Rex Gandy

Number: 15/session

What: Students will see matter heated to 10,000 C° creating a plasma that is confined in a magnetic bottle.

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Activity: 31

Title: Space Physics

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 200 Allison Lab

Who: Dr. J. D. Perez

Number: 20/session

What: Showing of NASA films reporting on space missions. Physicists will be available to answer questions and discuss films with students.

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Activity: 32

Title: Magnetic Levitation-Superconductivity

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 310 Allison Lab

Who: Dr. Barnes et. el.

Number: 15/session

What: A demonstration of the Meisner effect using a high temperature superconductor. Students will cool the copper oxide superconductor and levitate a small magnet.

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Activity: 33

Title: High Power Microscopy

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 310 Allison

Who: Dr. Barnes et. al.

Number: 15/session

What: A stereo zoom microscope which permits viewing item in 3-D will be used to examine a variety of everyday items with magnifications up to 150 times. A Scanning Electron Microscope will be demonstrated showing magnifications up to 300,000 times.

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Activity: 34

Title: Electron Microscopy

When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM

Where: 155 Funchess Hall

Who: Drs. Dute and Dylewski and Mr. Rush

Number: 12/session

What: Demonstration of the use of the electron microscope to view the ultrastructure of various matter.

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Activity: 35

Title: Chemical Demonstrations with Emphasis on Concepts Involving Energy

When: 2:30 PM - 3:30 PM

Where: 134 Chemistry Building

Who: Drs. Shevlin and Hill

Number: 200

What: A number of stimulating chemical demonstrations with the unifying concept of the role of energy in transformations.

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Activity: 36  
Title: Use of Seismic Refraction to Identify Types of Materials Beneath the Ground Surface  
When: 10:00 AM - 12:00 Noon  
1:30 PM - 3:30 PM  
Where: 200 Petric Hall  
Who: Dr. T. J. Carrington  
Number: 15/session  
What: 10:00 AM - Use seismic unit to determine seismic velocities in subsurface materials. Graph and interpret data.  
1:30 PM - Determine seismic source by triangulation (similar to locating earthquake focus by triangulation)

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Activity: 37  
Title: Cold and Hot Springs: The Geothermal Connection  
When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
Where: 118 Petrie Hall  
Who: Dr. Jim Saunders  
Number: 45/session  
What: Presentation with slides and actual specimens

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Activity: 38  
Title: Demonstration of Living Reptiles and Amphibians of the Southeast  
When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM  
Where: 203 Physiology Building  
Who: Dr. Emmett Blankenship  
Number: 25/session  
What: Living specimens of southeastern reptiles and amphibians will be displayed. Basic natural history of each will be presented. Unique and unusual characteristics will be highlighted.

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Activity: 39  
Title: Dynamical Systems and Numerical Mathematics  
When: 10:00 AM - 10:50 AM  
Where: 252 Parker Hall  
Who: Dr. Steve Stuckwisch  
Number: 15  
What: Computer Demonstrations of faculty research in the area of Dynamical Systems and Numerical Mathematics.

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Activity: 40  
Title: Tour of the Auburn University Cell Science Center  
When: 10:00 AM - 10:50 AM  
11:00 AM - 12:00 Noon  
Where: 131 Funchess Hall  
Who: Dr. Robert Locy  
Number: 20/session  
What: Tour of Fermentation Facility, Monoclonal Antibody Facility, Animal Room, Hybridoma Production Lab, Plant Cell and Tissue Culture Facility

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Activity: 41  
Title: Tour of Auburn University Electron Microscopy Center  
When: 1:30 PM - 2:20 PM  
2:30 PM - 3:30 PM  
Where: 131 Funchess Hall  
Who: Dr. Dan Delewski  
Number: 30/session  
What: Scanning Electron Microscope, Transmission Electron Microscope and Light Microscopes

## College of Veterinary Medicine

Activity: 42

Title: A Day at the College of Veterinary Medicine. Students participating in this activity need to plan to spend all day at the Vet School (The Vet School will provide lunch)

When: 10:00 AM - 3:30 PM

Where: Assemble at the Overton Auditorium on the College of Veterinary Medicine campus. Please look at your campus map and note that the school of Vet Medicine is better than one mile from the center of campus. You will need to make transportation arrangements with your teacher.

Who: Administration, Faculty and Students of the College of Veterinary Medicine

Number: 80

What: 10:00 AM - 3:30 PM; Welcome to the College of Veterinary Medicine - Dean Vaughan and outline of activities for the day by Assistant Dean Beard.

Following this students will form four groups of 20 and then rotate through the following Vet Medicine Groups.

Group I Companion Animal Medicine and Surgery. Students will see Endoscopic Surgery, Intradermal Skin Testing on an Allergic Dog and Laser Surgery.

Group II. Application of Imaging Systems. Students will see CAT Scan, MRI and Color Doppler including a jugular and carotid pulse demonstration on group volunteers.

Lunch Activities	Brown Bag with Veterinary Students Questions on admissions to Vet School Discuss use of laboratory animals in research Demonstrations by Raptor Rehabilitation Group
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Group III. Physiological Functions Lab. Cardiovascular Interactive Video - students will be able to see and interact with video disc simulation of A heart in arterial fibrillation (such as President Bush had). Electrocardiograph - each student will have the opportunity to have an EKG strip run on their heart function and take it home with them.

Group IV. Large Animal Medicine and Surgery. Thermography - color, infra red heat patterns will be demonstrated on students and animals (same thing as GatorAid commercials). Equine Caesarian Film - surgical delivery of a foal on film. Ultrasonography of Pregnant Mare - live demonstration. Tour of Barns - calves, sheep, goats, horses and llamas can be observed and interacted with.

**Other Activities**

Activity: 43

Title: STAR TREK VI: The Undiscovered Country, &  
The ADDAMS FAMILY

When:	9:00 AM - 11:00 AM	STAR TREK VI:
	11:00 AM - 1:00 PM	ADDAMS FAMILY
	1:00 PM - 3:00 PM	STAR TREK VI:
	3:00 PM - 5:00 PM	ADDAMS FAMILY

Where: Langdon Hall.

Who: Auburn University - Science Olympiad coordinating committee

Number: Limited to Available Seating (~300) No ticket required

What: Theater screening of the box office hit movies: STAR TREK VI, and The ADDAMS FAMILY.

# Appendix H

Master schedule of all Science Olympiad events





# Science Olympiad National Tournament

May 15-16, 1992

Auburn University, Auburn, Alabama

## Master Schedule of Olympiad Activities

### Friday, May 15, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Campus Activities Sign-up	Hotel and Conference Center	9:00 a.m. - 1:00 p.m.
Registration	Hotel and Conference Center	9:00 a.m. - 4:30 p.m.
Teacher Workshops	See Registration Packet	
Exhibits & Campus Activities	See Registration Packet	10:00 a.m. - 3:30 p.m.
NASA Special Event	Foy Union, Room 213	9:00 a.m. - 4:30 p.m.
Movies	Langdon Hall	9:00 a.m. - 4:45 p.m.
Lunch*	Terrell Dining Hall	11:00 a.m. - 1:30 p.m.
Reception for Officials	Hotel and Conference Center	4:00 p.m. - 6:00 p.m.
Dinner (all participants)†	Terrell Dining Hall	4:00 p.m. - 6:00 p.m.
<b>Opening Ceremony</b>		
Seating	Eaves Memorial Coliseum	6:00 p.m. - 6:30 p.m.
Ceremony	Eaves Memorial Coliseum	6:30 p.m. - 8:30 p.m.
Swap Meet	Terrell Dining Hall	8:30 p.m. - 10:00 p.m.
Ice Cream Social & DJ	Terrell Dining Hall	8:30 p.m. - 10:00 p.m.
Supervisor/Coaches Meeting	Hotel and Conference Center	9:00 p.m. - 10:00 p.m.

### Saturday, May 16, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Breakfast*	Terrell Dining Hall	6:30 a.m. - 9:30 a.m.
Impound Devices	At Event Site	8:00 a.m. - 8:30 a.m.
Science Olympiad Competition	Auburn University Campus	8:30 a.m. - 4:30 p.m.
Teacher Workshops	See Registration Packet	9:00 a.m. - 4:00 p.m.
Lunch*	Terrell Dining Hall	11:00 a.m. - 1:30 p.m.
Banquet	Foy Union Ball Room or Hotel and Conference Center	4:30 p.m. - 7:30 p.m.
<b>Awards Ceremony</b>		
Division B		
Seating	Eaves Memorial Coliseum	6:00 p.m. - 6:30 p.m.
Ceremony	Eaves Memorial Coliseum	6:30 p.m. - 7:45 p.m.
Division C		
Seating	Eaves Memorial Coliseum	8:00 p.m. - 8:30 p.m.
Ceremony	Eaves Memorial Coliseum	8:30 p.m. - 9:45 p.m.

### Sunday, May 17, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Brunch*	Terrell Dining Hall	10:30 a.m. - 1:30 p.m.
Officials' Rules Meeting	Hotel and Conference Center	7:30 a.m. - noon

\* See registration packet for information on meals.

† Dinner on Friday night will be provided by Auburn University.



# Appendix I

One-day-early teacher workshops



# NASA

## Mobile Teacher Resource Center

### Free Educational Materials

- I. NASA is bringing their LASER (Learning About Science, Engineering and Research) Van to the 1992 Science Olympiad National Tournament. The Van will be set up as a Mobile Teacher Resource Center (MTRC)
- II. The MTRC is a resource of free NASA educational materials, including videos, slides, audio cassettes, and software on a variety of space related subjects. NASA will provide a single two hour VHS cassette and a single thirty minute audio cassette to each teacher who attends. Any teacher wishing to make slides should bring their own ASA 64 slide film. In order to help you make an informed decision about this workshop we have included some literature about Project LASER and the MTRC.
- III. During the two day period, (May 15 and 16) this workshop (which lasts two hours) can accommodate only 48 participants (12 per session times 4 sessions). The LASER Van will be parked by the War Eagle Aviary, South of Haley Center, near the center of campus. The four scheduled workshops are as follows:
  - 10:00 AM Friday, May 15, 1992
  - 1:30 PM Friday, May 15, 1992
  - 10:00 AM Saturday, May 16, 1992
  - 1:30 PM Saturday, May 16, 1992
- IV. In order to help us plan, please call and register for this workshop. Call Ms Cheryl Matheny of the Auburn University Physics Department and she will register you by phone on a first come first served basis. Her number is (205) 844 - 6416.

ORIGINAL PHOTOGRAPH  
OF POOR QUALITY

ORIGINAL PHOTOGRAPH  
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# NASA

## Lunar Sample

### Education Program

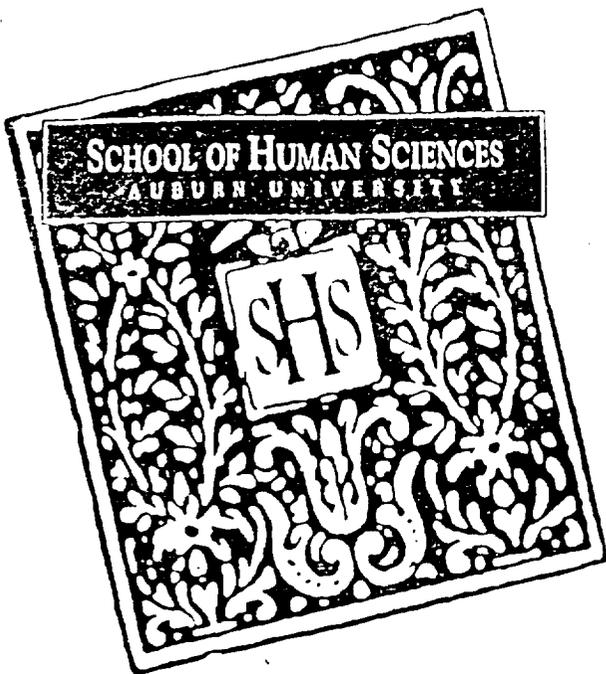
- I. NASA is bringing their Lunar Sample Workshop to the 1992 Science Olympiad National Tournament. Will Robertson of NASA will be conducting the workshop and Peter Salpas of the Auburn University Geology Department will be your workshop host. The workshop will be held in Room 118 of Petrie Hall.
- II. Representative samples of rock and soil from the moon are available for loan for teachers to use with their students. The samples are encased in a clear plastic disk for use with a stereo microscope. Printed and audiovisual materials accompany the samples to provide a complete package of classroom activities.
- III. To qualify for a lunar sample loan, educators must attend a lunar sample certification workshop. At the workshop teachers will learn about the lunar sample program, lunar exploration history, classroom uses for the lunar samples, and special requirements for requesting and storing the samples. The workshop will last two hours and will be offered at the following times:  

10:00 AM Friday, May 15, 1992 in Room 118 of Petrie Hall  
1:30 PM Friday, May 15, 1992 in Room 118 of Petrie Hall
- IV. We can accommodate 50 persons at each workshop and the workshop will be offered on a first come, first served basis.

OFFICE OF  
OF 1992

COOPERATION





April 29, 1992

Dear National Science Olympiad Teacher/Coach:

We are looking forward to meeting you!

Administrators and faculty of the School of Human Sciences and the University Committee on Cultural Diversity are excited about hosting you on the Auburn campus and invite you to join them, as well as administrators and faculty from across campus, for a Coffee/Idea Exchange on Friday, May 15, from 11:00 am to noon in Spidle Hall 244. Our purpose is to build networks with you and to strengthen the bridges within the educational system. We hope that this network will allow us to develop a relationship with you that will help all of us best prepare tomorrow's leaders for the challenges they will face in the coming century.

To help us plan, please R.S.V.P. by Fax (205/844-3749) or telephone (205 844-4790) by May 10. Best wishes for a great trip to Auburn.

Sincerely,

Paulette P. Hill, Ph.D.  
Assistant Dean for External Affairs  
School of Human Sciences

PPH/amc

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# **TEACHERS / COACHES**

**HOSPITALITY ROOM**

**FOY UNION BUILDING ROOM 108**

**SATURDAY, MAY 16, 1992**

**9:00 AM - 4:00 PM**

**HOSTED BY**

**AUBURN UNIVERSITY**

**VISIT WITH VARIOUS ADMINISTRATORS AND FACULTY**

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# Appendix J

NASA special event



# A MISSION TO PLANET EARTH

A NASA and U.S. Space and Rocket Center Sponsored Special Event  
for the  
1992 Science Olympiad National Tournament

## Introduction

A special event for the 1992 Science Olympiad National Tournament has been designed by the Aspen Global Change Institute to celebrate and draw attention to NASA's Mission to Planet Earth.

The Special Event is both instructive and fun. It will require students to interpret a remotely sensed image of the Auburn University campus, to make "ground truth" observations, and to make inferences about the image as a result of the ground truth observations. The activity combines analytical interpretive skills with the physical challenge of visiting sites to obtain specific information within a one hour time limit. The full set of rules for this activity are contained in this packet.

## Awards

The U.S. Space and Rocket Center in Huntsville, Alabama, is awarding scholarships to members of the winning Junior and Senior High School teams and to one teacher from each winning team. A total of eight scholarships for a week at the Space and Rocket Center's Space Camp.

## Where, When and Who

The Mission to Planet Earth Special Event will be housed in the Foy Union building and will be open from 10 a.m. to 4:30 p.m. on Friday the 15th, and from 8:30 a.m. to 4:30 p.m. on Saturday the 16th of May. Team orientations will begin every 15 minutes (last orientation begins at 3:30 p.m.), with a maximum of six teams beginning at once. Teams will compete on a first come-first served basis and are encouraged to come early to avoid time conflicts with other events, especially on Saturday. Teams of up to three members may compete and will have one hour to complete the Special Event.

In the Special Event room, students will be given a short introduction to the activity, be given a list of questions to answer using a remotely sensed image, and have an opportunity to ask procedural questions. Then they will examine a large format, remotely sensed image and begin to solve their questions using the image and trips in the field to ground truth their observations. Upon returning, students will have an opportunity to answer more questions based on inferences from the image and their ground truth data.

## How To Prepare

Teams should bring a compass, good walking shoes and a watch to the event. The event will be held rain or shine, so be prepared to work in the rain. Clipboards, magnifying glasses and writing materials will be provided.

Included in this packet is a **Remote Sensing and Ground Truth Primer**. More information on remote sensing, image interpretation and ground truthing may be found in a number of books available in most libraries. A good starting place would be the following:

A guide to Remote Sensing: Interpreting Images from the Earth, by S.A. Drury, Oxford University Press, 199(). 199 pages.

Exploring Earth from Space, by Jon Erickson, TAB Books, 1989. 192 pages.

Mission to Earth: Landsat views the World, by Nicholas M Short II, U.S. Government Printing Office 1976. 495 pages.

Principals of Remote Sensing, by Paul J. Curran, Longman Press, 1985 . 282 pages.

### Special Thanks To

This Special Event would not be possible without the dedicated support of Mr. Jim Pruitt, Education Officer Marshall Space Flight Center, and his staff. In addition to technical support, NASA has made a significant financial commitment to the event.

The special event was designed by Mr. John Katzenberger, Dr. Jesse Boyce, Mr. Anthony Allen and Ms. Sarah Korn of the Aspen Global Change Institute in Aspen, Colorado. The Ground Truth Studies Project, of the Aspen Global Change Institute, is an official program of the International Space Year.

The remotely sensed image was processed by Mr. John Dykstra of Intergraph and Mr. Greg Cox of the University of Alabama in Huntsville. The image data were processed on an InterGraph image processing workstation donated by the InterGraph Corporation in Huntsville, Alabama. The InterGraph workstation is located at the University of Alabama in Huntsville.

Dr. Tommie Blackwell, Director of Education at the U.S. Space and Rocket Center, has contributed six student and two teacher scholarships to the U.S. Space and Rocket Center's Space Camp to the winners of the event.

# A MISSION TO PLANET EARTH

## SPECIAL EVENT RULES

### **Space Explorers Ground Truth Planet Earth**

Space explorers in our sector of the galaxy pick up radio and television broadcasts about the 1992 Science Olympiad. Curious to learn more about science on planet Earth they enter Earth orbit to investigate. Using pan-chromatic and multi-spectral scanners, and high altitude digital images, they zoom in on the Auburn University campus and learn what they can by remote sensing image interpretation. A ground truth field party lands and makes observations; reporting back...

### **DESCRIPTION:**

The contestants will interpret and identify a number of pixel groups on a remotely sensed digital satellite and high altitude color infrared image of the Auburn University campus. The objective of the contestants is to interpret the image and to determine what the areas marked on the image represent. Determination of the marked pixel groups will require direct field observation ("ground truth") to record the required data while other questions will require interpretation of the image based on ground truth derived data.

**NUMBER OF PARTICIPANTS:** 2 or 3

**MAXIMUM TIME:** 60 minutes (late finishers will receive penalty points)

### **THE COMPETITION:**

- a. A maximum of six teams will be able to participate at the same time. Teams will be admitted to the testing area on a first come-first served basis. The Special Event room will be in the Foy Union Building.
- b. Teams will be given a short introduction to the event every fifteen minutes starting on the hour and be allowed to ask procedural questions. Each team will receive a clipboard with a question sheet and a small format copy of the remotely sensed image for use while ground truthing. Timing will begin when contestants receive their clipboard and the orientation begins. Teams will have one hour to turn their questionnaires back in. In the event of a tie, the earliest returns will break the tie.

- c. Teams will proceed to the large format remotely sensed image, which will be in the room. Team members may split up or may remain together. Teams are free to return to the event room to consult the large format image as necessary.
- d. The question form will provide space for listing the dominant type of reflecting surface, ie. asphalt, soil, rock, plant type, body of water, etc. and the specific name of the pixel group, ie. Jordan-Hare Stadium, magnolia tree, Thatch Avenue, etc.

Several bonus questions will be based <sup>on</sup> interpretation of the image.

- e. Teams should return their questionnaires to the event timer in the Special Event room. Timing will stop when the questionnaires are handed in to the timer, and once they are in the forms will not be given out again.

### **SCORING**

Teams will be ranked according to performance in correctly identifying pixel groups. The highest number of correct identifications will determine the winner. Each pixel group correctly identified is valued at 10 points (5 points for reflective surface identification, 5 points for specific name and location). If more than one team gets the same score, rank will be determined by the total time taken to complete the event. Teams with the shorter time break the tie.

After one hour from the team's starting time, penalty points of one point per minute will be subtracted from the team's score. Students should keep in mind that it may be worthwhile to get a 5 point penalty in order to correctly answer a 10 point question.

# Remote Sensing & Ground Truth Primer

## What Is Remote Sensing and Why Do We Use It?

It is said that the human eye provides us with about 90% of the information we receive about our environment. As well as giving the most varied information, visual appearance is the only source of knowledge at great distance, without the aid of complex instruments. Since we are so visually oriented, people have long been striving to develop technological means of continually expanding our ability to see.

Remote sensing is the process of obtaining information from a distance; non-contact sensing. Modern remote sensing technology has greatly expanded our ability to see and understand the Earth and its systems and to observe changes.

Remote sensing has become a critical tool in everything from the verification of arms control treaties to the provision of emergency aid to disaster-struck regions. Through remote sensing we learn about problems such as droughts, famines, and floods; we obtain information about agricultural practices, weather conditions, transportation systems, river flows, and terrain changes. We use remote sensing to locate Earth's natural resources and can then use that information to exploit or protect them.

Since most of the data we receive from remote sensing comes to us in image form, the light which produces images is of central significance to the process.

## Light and the Electromagnetic Spectrum

Light gives us two different kinds of information about objects. Size, shape and texture are revealed by the way the object is illuminated and shadowed in relationship to the light source. The second kind of information comes mainly from the way light is reflected and absorbed by the object; this shows up as the object's brightness and color.

Light is a form of electromagnetic (EM) radiation. Only a small part of this spectrum is visible light. Wavelengths just shorter than visible are ultraviolet and wavelengths just longer than visible are infrared.

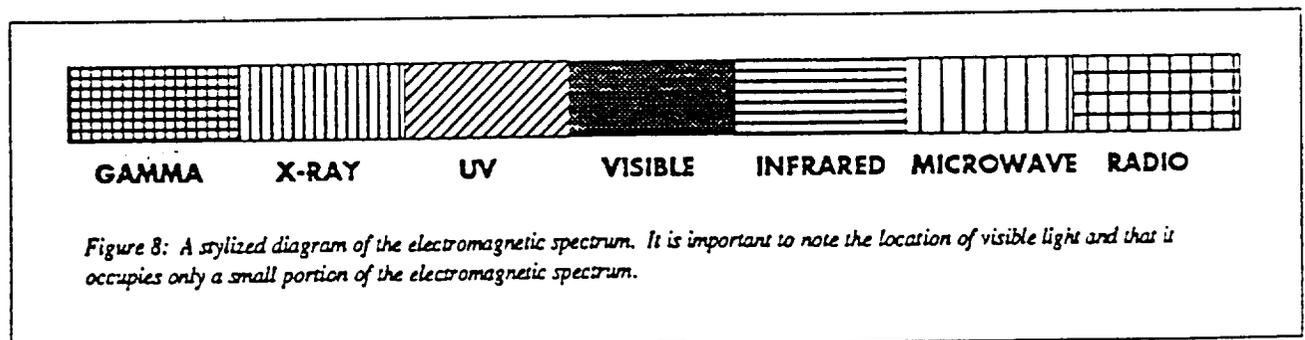


Figure 8: A stylized diagram of the electromagnetic spectrum. It is important to note the location of visible light and that it occupies only a small portion of the electromagnetic spectrum.

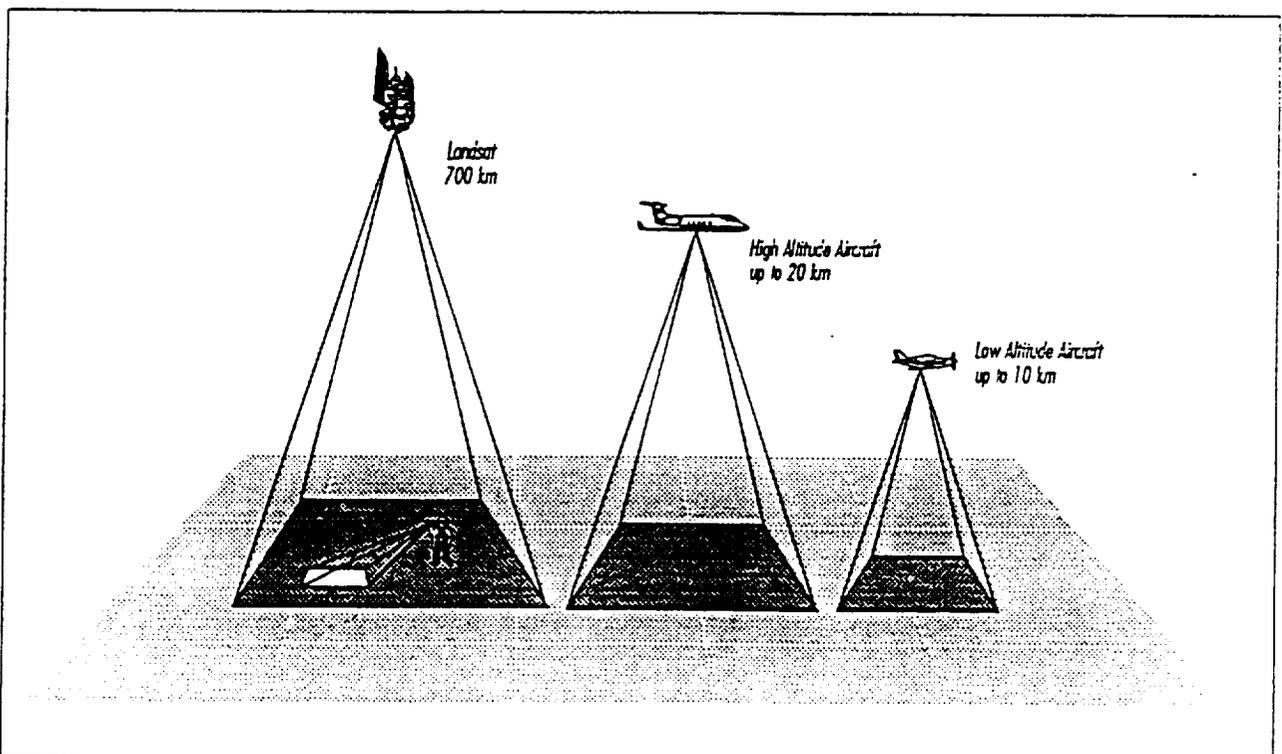
## Sensors

In the process of remote sensing, information about our environment is conveyed by electromagnetic energy (from the spectrum on the chart above) and received and recorded by sensors. Most modern technological sensors have counterparts that occur in nature. For example, the photographic camera and the human eye both sense visible light; the microphone and the ear pick up sound waves; smoke alarms and noses both sense molecular dispersions we call odors.

The sensors used in remote sensing are primarily sensitive to the visible, infrared, and ultraviolet wavelengths—they sense and record data in those spectral bands. This data is then generally converted to image form.

## Platforms

The physical platforms that carry sensors improve their capabilities and provide their perspectives. Platforms for remote sensing can be on land or in water, air, or space. For the purposes of this project, aircraft and space satellites are the primary focus. Aircraft platforms are typically flown between 3,000 to 21,000 meters. The data they deliver is usually in the form of photographs in color, black and white, and color infrared. Aircraft platforms can also utilize digital sensors similar to those used by Landsat. The information we receive from space is generally digital and comes from manned missions such as the Shuttle, weather satellites like GOES and NOAA, earth resources satellites like Landsat and SPOT, and sea satellites such as Seasat.



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## ***Altitude, Scale and Resolution***

An understanding of several characteristics of all images, regardless of the platform or sensor from which they come, helps in understanding the information that they can provide about land cover. Scale, the ratio between the size of the image of an object and the size of the actual object, is a primary concern. Spatial resolution of an image is closely related to scale. Spatial resolution refers to the linear, measurable discrimination of a sensor. Spectral resolution indicates the portion or band of the electromagnetic spectrum discriminated by a sensor. Temporal resolution specifies the time at which the sensor recorded earth information.

The resolution of satellite images is measured in units called picture elements or pixels. One pixel (or technical limit similar to the grain of photographs) is the smallest parcel of information in an image. From the first sensors on satellites in the 1950's to the U.S. Landsat and French SPOT systems of today, the resolution of satellite images has increased markedly from several kilometers on a side to a pixel resolution 10 m<sup>2</sup> on the SPOT panchromatic sensor.

## ***Processing Data***

Data processing is the intermediate step between collecting remotely sensed data and using the information derived from it. Most data processing concerns image enhancement and analysis. Images can be analog (photographic) or (digital) electronic — that is, continuous tone on a photographic film or digitized pixels of information stored on electronic storage media such as magnetic tape.

## ***Analog and Digital***

Analog refers to an image in which continuous variation in the object being sensed is represented by a continuous variation in image tone. A photograph is an example of an analog image. Photographs capture a tremendous amount of data all at once, however, they cannot be directly manipulated by a computer unless they are first converted to a digital format.

Digital refers to an image in which the object being sensed has been captured in discrete wavelength bands. This conversion is generally done electronically. Electronic digital computer processing is generally more flexible and more quantitative than photographic processing.

## ***Displaying the information***

Remotely sensed images are usually displayed as a color print or on a computer screen. Many sensors are able to collect data from wavelengths invisible to the human eye, which can detect only wavelengths corresponding to red, green and blue. During the data processing phase, it is possible to assign colors visible to us, to represent wavelengths we normally can not see. In color infrared photography, the color red is traditionally assigned to the frequency for the near infrared, which results in healthy vegetation showing up as vibrant red, because of its high

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reflectivity in the infrared region of the spectrum. At first, one may be disoriented by the "false color" of the images in this Handbook or other color infrared images. The coloration of the images in this Handbook are the norm for color infrared images, but a scientist studying a specific feature, with a particular reflectance or emittance characteristic, might choose to highlight these features by assigning different color codes. In fact, any other color codes may be assigned, producing images which look "true color" or are even more exotic than the standard color infrared.

## ***Geographical Information Systems***

Geographical Information Systems (GIS) are computer-implemented geo-referencing and overlay systems that are increasingly used to integrate remote sensing data with other types of spatial or locational information (topographic, political, cultural, economic, ground truth, etc.). Such systems provide powerful ways to use and compare remote sensing data. A satellite image of a country's vegetation can receive overlays of roads, district or county boundaries, population statistics, etc. In essence, a GIS is a data base management system specifically designed for simultaneous processing of spatial data with many capabilities similar to automated map making.

## ***Ground Truth***

Ground truth refers to field observation and measurement which provides the link between remotely sensed data and the environmental information that is desired. Ground Truth is used to formulate the way remote sensing data may be applied to a particular information requirement. It may be used to calibrate the remote sensing for the local conditions. It is used to interpret and analyze the data. And it may be used to validate the results of the interpretation and analysis process. The collection of ground truth by students will enable them to compare and augment what they measure and observe about their local environment with remotely sensed images of their location.

## ***Teaching Remote Sensing & Ground Truth***

Remotely sensed images may be used very successfully as educational tools with students of all ages. Sometimes it is useful to begin with images closest to the neighborhood and progress to images obtained from greater distances: hand-held photos, low-altitude aerial photos, high-altitude aerial photos, and then satellite images. The false-color of some images may initially confuse learners, but this quickly remedied with an explanation that it is similar to assigning a color code to a map. For instance, the signature of vegetation sensed by infrared sensors is often assigned the color red on satellite images. When remotely sensed images are compared to maps, the effects of scale must be investigated to avoid confusion about an object appearing larger on one than the other.

Remote sensing and ground truthing are activities that make use of knowledge and skills students acquire from many traditional school subjects. These activities remove many of the physical walls between students and their environment. Their improved ability to "see" and understand their world can bring them closer to experiencing the interdependence of all life and the fragile systems of this complex planet, Earth.



ORIENTAL PARK  
COLOR PHOTOGRAPHY



# Appendix K

Opening ceremonies





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# Opening Ceremonies

## **Eighth Annual Science Olympiad National Tournament Auburn University, Auburn, Alabama**

**May 15, 1992**

### **Eaves Memorial Coliseum**

- 6:00 p.m. Seating in Eaves Memorial Coliseum  
Flag bearers assemble on ground floor of coliseum.
- 6:30 p.m. Presentation of the Colors  
Auburn University ROTC  
Roll Call of the States and Schools  
*Marlin Simon*, Auburn University  
The National Anthem  
Auburn University Singers  
Welcome  
*William V. Muse*, President, Auburn University  
*Gerard Putz*, Science Olympiad President  
*Jack Cairns*, Science Olympiad Vice President  
*J.A. Bethay*, Associate Director, Marshall Space Flight Center  
*Devona G. Williams*, DuPont  
Coaches Recognition  
Auburn University, Science Olympiad Board, &  
Glencoe/Macmillan/McGraw Hill  
Special Recognition Awards: *Sharon Putz*  
Laser Light Show by Stone Mountain Lasers  
Announcements  
Olympiad Pledge and Charge to Teams  
Retire the Colors
- 8:30 p.m. Swap Meet and Ice Cream Social, Terrell Dining Hall
- 9:00 p.m. Event Supervisors/Coaches Meeting  
AU Hotel and Conference Center

Dais:

Jack Cairns, Science Olympiad  
Gerard Putz, Science Olympiad  
Sharon Putz, Science Olympiad  
William V. Muse, Auburn University  
Ivan Legg, Auburn University  
Marlin Simon, Auburn University  
W.D. Perry, Auburn University

Devona G. Williams, DuPont  
Peter Morrow, DuPont  
Buzz Ellis, Glencoe/Macmillan/McGraw Hill  
Kathryn Carey, American Honda Foundation  
J.A. Bethay, NASA  
Jim Pruitt, NASA  
Ed Buckbee, U.S. Space and Rocket Center



# Appendix L

Event supervisors





## Event Supervisors

Event	Name	Affiliation	State
A for Anatomy	Jim Dobie	Auburn University	AL
	Dorothy Hickman	Laurel High School	DE
Aerodynamics Aloft	Frank Uhlig	Auburn University	AL
	Dale Reynard	Wilmington Friends School	DE
	Paul Otto	University of South Dakota	SD
Astronomy	J.M. Wersinger	Auburn University	AL
	James A. Smith	StarLab Dealer	GA
Balancing Equations	Curt Ward	Auburn University	AL
	Mary O'Conner	Caesar Rodney High School	DE
Bio-Process Lab	Arthur Appel	Auburn University	AL
Bridge Building	Michel Smith	Auburn University	AL
	Mike Ruby	Rockwood S. JHS	MO
	Dick/Shirley Prouty	Everett Comm. College	WA
Cell Biology	Narendra Singh	Auburn University	AL
	Harry Dillner	Christiana High School	DE
Chemistry Lab	Tom Webb	Auburn University	AL
Circuit Lab	Mike Bozack	Auburn University	AL
	Dave Stover	St. Marks High School	DE
Computer Prog.	Stewart Baldwin	Auburn University	AL
Designer Genes	Marie Wooten	Auburn University	AL
	George Renwick	Newberry College	SC
	John Carleton	St. Marks High School	DE
Don't Bug Me	Debbie Folkerts	Auburn University	AL
	Michael Mack	Clinton High School	SC
Egg Drop	Gregg Harris	Auburn University	AL
E.V.E.	Eddie Hand	ADECA	AL
Get Your Bearings	Bert Salcedo	Auburn University	AL
It's About Time	Herman Pat Goeters	Auburn University	AL
	Jerry Fair	Clock Maker	KS
	Joe Moulder	Lee High School	MI
Keep the Heat	Curt Peterson	Auburn University	AL
	Allan Jacobs	Trinity Lutheran	MI
Measurement	Charlotte Ward	Auburn University	AL
	John Reiher	New Castle Voctech	DE
Metric Estimation	Peter Nylen	Auburn University	AL
	Harold Miller	NY State Director	NY
Mission to Planet Earth	John Katzenberger	Aspen Global Change Inst.	CO
	Jessie Boyce	Aspen Global Change Inst.	CO
Mousetrap Vehicles	Jo W. Heath	Auburn University	AL
	Bob Griffy	Chute MS	IL





## Event Supervisors

Event	Name	Affiliation	State
Pentathlon	Bill Baird	Auburn University	AL
	Karen Lechner	Kent County Orth. School	DE
Physics Lab	Jim Hanson	Auburn University	AL
	George Kalligeros	Mt. Clemens High School	MI
Picture This	Judy Prior	Auburn University	AL
Qualitative Analysis	Curt Shannon	Auburn University	AL
	Karen Schloegl	Buffalo Grove H.S.	IL
Road Rally	Mark Steltenpohl	Auburn University	AL
	Bob Campbell	Snohomish County Public Works	WA
Rocks, Minerals & Fossils	Tracy Tatum	Auburn University	AL
Science Bowl	Bill Dorgan	Auburn University	AL
	John Yanaitis	Wm. Penn High School	DE
Science Crime Busters	Jimmy Mills	Auburn University	AL
	Marge Christoph	St. Marks High School	DE
Scrambler	Michel Smith	Auburn University	AL
	Br. Tim Paul	St. John's Prep.	MA
Simple Machines	Rex Gandy	Auburn University	AL
	Charles Gosselin	Penn Valley C.C.	MO
Sounds of Music	Randall Faust	Auburn University	AL
	Kathy Melvin	Polytech H.S.	DE
	Gene Carlisle	Delaware Science Oly.	DE
Trajectory Contest	John Williams	Auburn University	AL
	Robbie Adams	C.R. High School	DE
	Vanetta Perry	New Mexico Tech	NM
Water Quality	Bill Hall	University of Delaware	DE
	Donna Sefton	U.S. EPA, Region 7	KS
Weather or Not	Steve Knowlton	Auburn University	AL
Write it/Do it	Jim Armstrong	Auburn University	AL
	Sandra Wolford	Wallace Wallin School	DE
	Melinda Thornton	Laurel MS	DE
Arbitration	Dick Smith	PA Science Olympiad	PA
	Sue Zamzow	PA Science Olympiad	PA
Score Keeping	Burt Basney	Warren Cons. Schools	MI
	Carol Basney	Warren Cons. Schools	MI
	Lynne Dewey	Michigan Science Oly.	MI
	Vicki Boyd	Lake Forest High School	DE
	Jim Stagliano	Auburn University	AL
	W.D. Perry	Auburn University	AL



# **Appendix M**

**Schedule of events**





# Schedule of Events

## Division B (Grades 6 - 9)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 137				Team # 1-25 CY 137		Team # 26-50 CY 137	
Astronomy: Part I Student Activities Bldg., Room 104			Team # 18-34 St. Act. 104	Team # 1-17 St. Act. 104	Team # 35-50 St. Act. 104		
Bio-Process Lab Cary Hall 217	Team # 26-50 CY 217	Team # 1-25 CY 217					
Don't Bug Me Funchess Hall 203				Team # 26-50 FS 203	Team # 1-25 FS 203		
Keep The Heat Cary 209			Team # 1-25 CY 209	Team # 26-50 CY 209			
Measurement Parker Hall 120/122	Team # 1-25 PKH 120/122	Team # 26-50 PKH 120/122					
Metric Estimation Saunders Lab 324	Team # 1-25 SN 324	Team # 26-50 SN 324					
Picture This Haley Center 2326/2330/2332/2334			Team # 13-24 HC 2326	Team # 38-50 HC 2326	Team # 1-12 HC 2326	Team # 25-37 HC 2326	
Road Rally Haley Center 2406					Team # 26-50 HC 2406	Team # 1-25 HC 2406	
Rocks, Minerals and Fossils Haley Center 2174/2169		Team # 26-50 HC 2174/2169	Team # 1-25 HC 2174/2169				
Science Bowl Haley Center 2370	Team # 1-18 HC 2370	Team # 19-36 HC 2370	Team # 37-50 HC 2370				Semi-Finals & Finals
Science Crime Busters Saunders Lab 212	Team # 26-50 SN 212	Team # 1-25 SN 212					
Simple Machines Parker Hall 104/108	Team # 18-34 PKH 104/108	Team # 1-17 PKH 104/108	Team # 35-50 PKH 104/108				
Sounds of Music Goodwin Music Hall 227/228/229	Team # 27-34 GB 227	Team # 10-18 GB 227	Team # 43-50 GB 227	Team # 19-26 GB 227	Team # 35-42 GB 227	Team # 1-9 GB 227	
Weather or Not Chemistry Building 134				Team # 1-25 CB 134	Team # 26-50 CB 134		
Write It/Do It Saunders Lab 300/306					Team # 1-25 SN 300/306	Team # 26-50 SN 300/306	

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Aerodynamics Aloft Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Astronomy: Part II Student Activities Building	All Teams Student Activities Building						
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Egg Drop Haley Center - Stair Well East Side	All Teams Haley Center - Stair Well East Side						
Get Your Bearings South End of Duncan Drive	All Teams Wooded Area at South End of Duncan Drive						
Mousetrap Vehicles Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, East Concourse						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Trajectory Contest St. Act. Building, Main Floor	All Teams Student Activities Building (Main Gym Floor, Room 103)						

SPECIAL EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab, Room 314	All Teams Saunders Lab, Room 314						





# Schedule of Events

## Division C (Grades 9-12)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 201	Team # 1-25 CY 201	Team # 26-50 CY 201					
Balancing Equations Chemistry Building 151			All Teams CB 151				
Bio-Process Lab Cary Hall 217					Team # 1-25 CY 217	Team # 26-50 CY 217	
Cell Biology Funchess Hall 208				Team # 18-34 FS 208	Team # 1-17 FS 208	Team # 35-50 FS 208	
Chemistry Lab Saunders Lab 224	Team # 1-17 SN 224	Team # 18-34 SN 224	Team # 35-50 SN 224				
Circuit Lab Parker Hall 114/118		Team # 35-50 PKH 114/118	Team # 18-34 PKH 114/118	Team # 1-17 PKH 114/118			
Computer Programming Tichenor Hall 203		Team # 1-25 TR 203	Team # 26-50 TR 203				
Designer Genes Cary Hall 136				All Teams CY 136			
Don't Bug Me Funchess Hall 203	Team # 26-50 FS 203	Team # 1-25 FS 203					
It's About Time Saunders Lab 212				Team # 26-50 SN 212		Team # 1-25 SN 212	
Measurement Parker Hall 120/122					Team # 26-50 PKH 120/122	Team # 1-25 PKH 120/122	
Metric Estimation Saunders Lab 324				Team # 1-25 SN 324	Team # 26-50 SN 324		
Physics Lab Parker Hall 100/102			Team # 35-50 PKH 100/102	Team # 1-17 PKH 100/102	Team # 18-34 PKH 100/102		
Qualitative Analysis Saunders Lab 216	Team # 26-50 SN 216		Team # 1-25 SN 216				
Road Rally Haley Center 2406	Team # 1-25 HC 2406		Team # 26-50 HC 2406				
Rocks, Minerals & Fossils Haley Center 2174/2169					Team # 1-25 HC 2174/2169	Team # 26-50 HC 2174/2169	
Science Bowl Haley Center 2370				Team # 19-36 HC 2370	Team # 37-50 HC 2370	Team # 1-18 HC 2370	Semi-Finals & Finals
Sounds of Music Goodwin Music Hall 102/105/134	Team # 43-50 GB 102	Team # 10-18 GB 102	Team # 1-9 GB 102	Team # 35-42 GB 102	Team # 19-26 GB 102	Team # 27-34 GB 102	
Write It/Do It Saunders Lab 300/306	Team # 1-25 SN 300/306	Team # 26-50 SN 300/306					

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Get Your Bearings South End of Duncan Drive	All Teams Wooded Area at South End of Duncan Drive						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Scrambler Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, West Concourse						

SPECIAL/DEMO EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab, Room 314	All Teams Saunders Lab, Room 314						



# **Appendix N**

**Program for the awards ceremonies**



## Awards Ceremonies

### **Eighth Annual Science Olympiad National Tournament Auburn University, Auburn, Alabama**

**May 16, 1992**

### **Eaves Memorial Coliseum**

- |           |   |
|-----------|---|
| 6:00 p.m. | Division B Seating in Eaves Memorial Coliseum |
| 6:30 p.m. | Division B Awards Ceremony                    |
| 8:00 p.m. | Division C Seating in Eaves Memorial Coliseum |
| 8:30 p.m. | Division C Awards Ceremony                    |

#### **Agenda:**

Presentation of the Colors  
Auburn University ROTC  
"America The Beautiful" performed by the Science Olympiad Orchestra.

Welcome and Introductions: *Marllin Simon, Ivan Legg, Gerard Putz and Jack Cairns*

#### Award Presentations:

Medals for events  
American Honda Foundation Scholarships

#### Special Awards:

U.S. Space and Rocket Center Scholarships  
American Watch Makers Institute  
American Geophysical Union  
National Earth Science Teachers Association

Plaques for 7th - 10th place teams

Trophies for 1st - 6th place teams

Farewell Remarks: *Gerard Putz & Ivan Legg*

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## **Appendix O**

Breakdown of events and how the participating teams scored







DIVISION C

1992 Science Olympiad  
National Tournament

Team #	School	Total Pts	A	B	B	C	C	C	C	D	B	M	P	P	R	R	S	S	W						
			N	A	R	E	H	C	O	B	E	E	M	H	A	O	C	R	R						
			A	L	I	L	E	I	M	E	A	S	T	T	Q	R	B	A	M						
			T	O	D	B	L	L	P	B	T	R	A	A	A	C	O	B	U						
			O	E	E	O	A	A	U	U	I	C	H	B	L	L	W	S	S						
			M	I	I	B	B	B	E	N	S	E													
			O	G	O	O	O	O	S	S	S														
			Y	O	O	E	O	B	B	R	S	S													
1C	Classical High School	45	1	1	1	4	1	9	1	1	1	1	1	1	1	2	1	1	10	2					
2C	Yankton High School	37	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
3C	Kettering Fairmont H.S.	89	1	10	9	1	1	3	1	6	1	9	1	3	8	1	1	3	5	9	4				
4C	Joel E. Ferris High School	33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
5C	Oxford Hills High School	37	1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	1	1	10	1				
6C	Lincoln Southeast High School	28	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1				
7C	Green River High School	20	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1				
8C	Illinois Mathematics & Scienc	75	1	1	1	1	5	1	1	8	7	6	1	7	1	1	1	1	1	10	1	6	1		
9C	Alexis I. duPont High School	40	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	8	1	1	1	1	9		
10C	Langham Creek High School	44	1	1	1	1	4	5	1	1	1	1	1	1	1	1	7	1	1	9	1	1	1		
11C	Albuquerque Academy	39	1	1	5	1	9	1	1	1	1	1	2	1	1	1	1	4	1	1	1	1	1		
12C	Wichita High School North	41	1	8	1	1	1	1	5	1	1	1	3	1	1	1	1	2	1	1	1	5	1	1	
13C	Stone Mountain High School	87	10	2	3	1	2	1	8	1	1	9	1	1	9	10	10	1	1	8	2	1	1	3	1
14C	NC School of Science & Matt	47	2	1	1	1	7	3	1	1	4	1	1	5	1	1	1	1	1	1	8	2	1	1	
15C	Beaverton High School	23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16C	Muscle Shoals High School	24	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17C	Irmo High School	107	11	11	1	8	8	2	1	1	11	7	6	1	1	2	6	4	1	1	10	11	1	1	1
18C	Northeast Lauderdale High	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19C	Maine-Endwell High School	51	1	1	1	9	1	1	1	1	2	1	5	1	1	3	1	7	1	1	1	1	1	8	1
20C	Chapel Hill High School	45	1	1	1	6	10	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	7	1
21C	Newnan High School	76	7	7	1	7	1	6	1	1	1	1	3	10	4	1	1	1	1	1	1	7	1	1	1
22C	Morgan High School	26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1
23C	Bozeman High School	33	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	9	1	1	1	1	1	1
24C	Thomas Walker High School	15	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1
25C	Rio Americano High School	66	1	1	1	1	1	1	1	1	3	10	1	8	1	1	1	1	1	1	6	4	1	1	8
26C	C.E. Byrd High School	57	1	1	1	1	1	1	1	1	1	1	7	6	1	1	1	1	1	8	7	1	1	1	1
27C	Gavit High School	25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1
28C	La Jolla High School	126	8	9	10	10	1	1	1	1	1	9	1	1	1	4	3	6	1	1	3	1	1	1	1
29C	Lanier High School	33	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30C	Cicero-North Syracuse High	85	9	1	7	1	1	1	10	1	8	3	8	1	1	1	1	5	10	1	1	1	7	5	1
31C	Cambridge Rindge and Latin	27	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1
32C	Madison West High School	62	1	1	2	3	1	1	1	7	1	1	1	6	6	1	9	1	1	1	4	1	4	2	6
33C	George Washington High Sch	52	1	1	1	1	1	1	10	10	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
34C	Bloomingsdale Senior High	21	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
35C	Ladue Horton Watkins High	44	1	1	6	1	1	4	1	3	1	1	1	1	1	1	1	4	1	9	1	1	1	1	1
36C	Forest Hills Central High	57	1	1	8	1	1	1	1	1	4	10	1	1	5	1	1	1	1	5	1	8	1	1	1
37C	Centerville High School	95	4	1	1	1	1	7	1	5	1	1	1	10	8	1	1	5	8	7	1	7	1	1	1
38C	North Central High School	44	1	6	1	1	1	1	6	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1
39C	Franklin High School	46	1	1	1	1	1	1	1	1	1	1	4	9	5	9	1	1	1	1	1	1	1	1	1
40C	Apple Valley High School	31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1
41C	Grand Haven Senior High	75	6	4	1	1	1	10	9	1	1	1	4	1	7	7	1	1	1	1	1	1	1	3	1
42C	Pembroke Hill School	67	1	5	1	1	1	8	1	1	1	2	1	1	1	1	1	1	1	5	1	1	1	1	1
43C	Fargo South Dakota High	35	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44C	St. Mark's High School	42	1	1	1	1	1	4	4	1	1	1	1	1	1	0	9	1	7	1	1	1	1	1	1
45C	Haverford High School	71	5	1	4	5	6	1	7	1	5	8	1	1	1	1	8	1	1	1	1	6	5	1	1
46C	Hookinsville High School	23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
47C	Stroudsburg High School	44	1	3	1	1	1	6	9	1	1	1	1	1	1	1	1	6	2	1	1	1	1	1	1
48C	University High School	42	1	1	1	1	1	1	1	1	1	1	4	1	1	5	1	1	1	3	1	1	1	1	1



# Appendix P

Certificate of participation





*Exploring the World of Science*

National Finals

Hosted By  
**Auburn University**

Award for Excellence  
Presented to

\_\_\_\_\_ for participation in  
The 1992 Science Olympiad National Tournament

*Gerard J. Putz*  
Gerard J. Putz  
National Co-Director

*John C. Cairns*  
John C. Cairns  
National Co-Director

*Marlin L. Simon*  
Marlin L. Simon  
Tournament Co-Director

*William D. Perry*  
William D. Perry  
Tournament Co-Director

May 16, 1992  
Date



## **Appendix Q**

**Follow-up letter to Governors**



# Auburn University

Auburn University, Alabama 36849-5312

Department of Chemistry  
179 Chemistry Building

Telephone: (205) 844-4043  
ATTNet: 221-4043  
FAX: (205) 844-6959

May 21, 1992

**Memo To:** Governor Guy Hunt  
State House  
Montgomery, AL 36103

**From:** W. D. Perry and Marllin L. Simon  
Co-Coordinators of the 1992 Science Olympiad National Tournament

**RE:** Participation in the 1992 Science Olympiad National Tournament

- I. The 1992 Science Olympiad National Tournament was held on the Auburn University campus May 15-16, 1992. Since you may not be familiar with this event, we will give you a 15-line description and then enclose some additional information.

During the fall of each academic year, about 10,000 schools begin working towards the Science Olympiad National Tournament. Each school forms a team of 15 students and 3 to 5 teachers. Teams compete in Regional, State and finally the National Tournament. Each state sends at least one junior high school and one senior high school team to the National Tournament. At all Olympiad tournaments, teams compete in 23 different science events such as A for Anatomy, Aerodynamics, Bridge Building, Chemistry Lab, Circuit Lab, Computer Programming, Rocks, Minerals and Fossils and many others which require a knowledge of physics, chemistry, biology and geology. Olympic style medals are awarded for each event and points are accumulated during the day for overall first, through sixth place trophies. There is a good balance between events requiring knowledge of science facts, concepts, processes, skills and applications. This is the largest, most significant event in this Nation to recognize the accomplishments of young scientists.

The additional information enclosed consists of the following:

- A. Auburn University Science Olympiad Public Relations brochure
  - B. Program for this year's Olympiad Tournament.
- II. This year nearly 3,000 science students and teachers attended the Olympiad Tournament and 1,440 of the students competed in the tournament.
  - III. We thought you would be proud to know that your state was represented at the 1992 Science Olympiad National Tournament. See the attached list. A copy of this letter has been set to each school.
  - IV. You should further be informed that these young science ambassadors from your state were not only interested in excellence in the sciences but that they were also extremely polite, courteous and among the most patriotic citizens of this Nation. Anyone who observed these students as they participated in this year's Olympiad Tournament would have to conclude that, while as a Nation we may have some isolated problems, we have reason to have great hope for the future.



## **Appendix R**

**Feedback note from La Jolla High School**



La Jolla High School



Dear: W.D.

What have you done!  
No other school will every  
want to match what was  
done at Auburn University.  
This Science Olympiad  
extravaganza will be  
something La Jolla will  
never forget. Thank for  
the experience!

Thanks

Joe Baron



## **Appendix S**

Complete copy of the 1992 Science Olympiad National Tournament Program



NATIONAL  
SCIENCE OLYMPIAD



*Exploring the World of Science*

**Auburn University**



**May 15-16, 1992**



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## NATIONAL SCIENCE OLYMPIAD STEERING COMMITTEE EXECUTIVE BOARD

**Gerard J. Putz**

President & Co-Director  
Regional Science Consultant  
Macomb Intermediate School District  
Mt. Clemens, MI

**W.D. Perry**

1992 National Site Coordinator  
Department of Chemistry  
Auburn University  
Auburn, AL

**Ray Thiess**

Oregon Tournament Director  
State Science Supervisor  
Oregon Department of Education

**Sharon M. Putz**

Executive Secretary  
Science Olympiad  
Rochester Hills, MI

**Jack C. Cairns**

Vice-President & Co-Director  
State Science Supervisor  
Delaware Dept. of Public Instruction  
Dover, DE

**Marlin L. Simon**

1992 National Site Coordinator  
Department of Physics  
Auburn University  
Auburn, AL

**Harold McConnell**

1993 National Site Coordinator  
Colorado Sci. Oly./ Univ. of So. Colorado  
Pueblo, CO

**Mary Lou Rankin**

1994 National Site Coordinator  
University of Arizona  
Tucson, AZ

## NATIONAL ADVISORY BOARD

**Richard Clark**

Past President  
National Science Supervisors Assn.  
Minnesota Department of Education

**Robert Dean**

Science Consultant  
San Diego, CA

**Buzz Ellis**

Senior Vice-President & Editor-in-Chief  
Glencoe  
Westerville, OH

**Harold Stonehouse**

Professor (Retired)  
Michigan State University

**Donald McCurdy**

Past Chairman  
NSTA Student Program Committee  
University of Nebraska

**Alice Moses, Past NSTA President**

Associate Program Director  
National Science Foundation  
Washington, D.C.

**Charles Gosselin**

Associate Dean  
Penn Valley Community College  
Kansas City, MO

**Dick Smith**

Independent Science Consultant  
Pennsylvania Science Olympiad

## 1992 SCIENCE OLYMPIAD NATIONAL TOURNAMENT STEERING COMMITTEE

Marlin Simon, Tournament Co-Director  
W.D. Perry, Tournament Co-Director  
Bill Dorgan  
Andreas Illies  
Steve Knowlton  
Bob Lishak  
Judy Prior  
Bert Salcedo  
Michel Smith  
Tracy Tatum

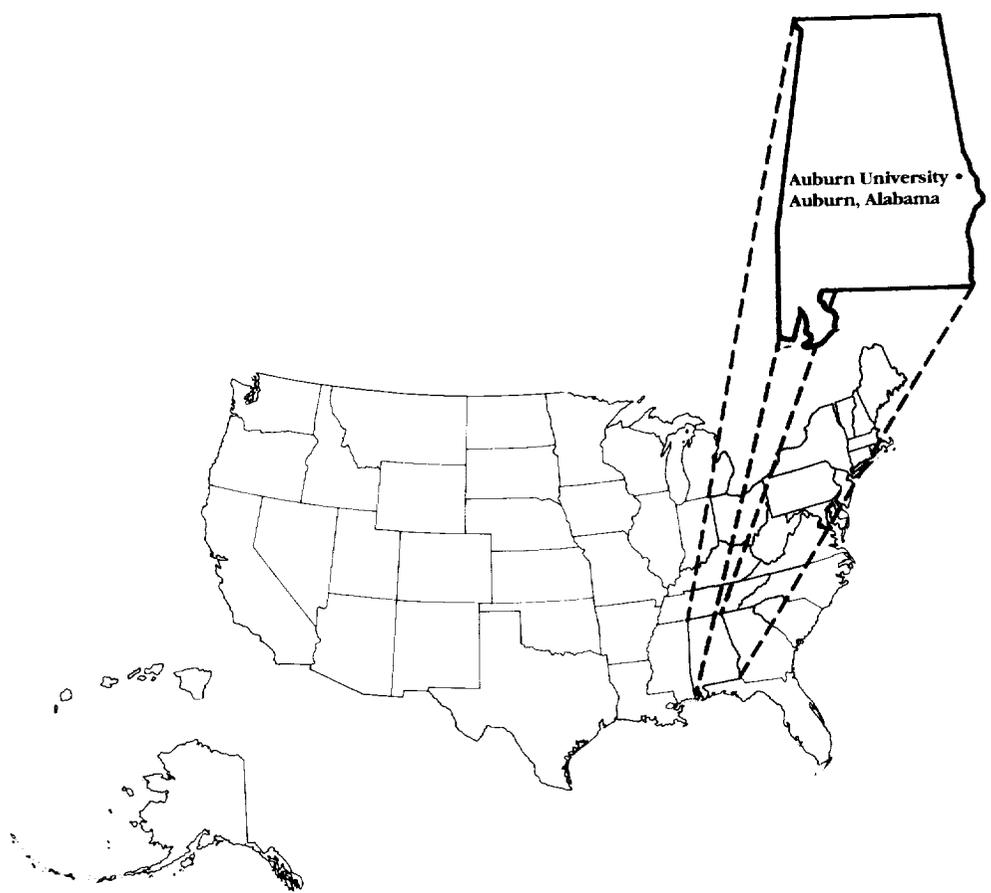
Department of Physics, Auburn University  
Department of Chemistry, Auburn University  
College of Sciences & Mathematics, Auburn University  
Department of Chemistry, Auburn University  
Department of Physics, Auburn University  
Department of Zoology & Wildlife, Auburn University  
Department of Botany & Microbiology, Auburn University  
Army ROTC, Auburn University  
Department of Mathematics, Auburn University  
Department of Geology, Auburn University

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Welcome to the Eighth Annual  
**Science Olympiad**  
**National Tournament**



Hosted by  
**Auburn University**  
Auburn, Alabama

## PRESIDENT'S REMARKS



*President George Bush at a White House Ceremony last month in Washington, DC recognized the outstanding achievement of last year's winning Science Olympiad students.*

*President Bush referred to the Science Olympiad students as "the best ambassadors that this country has. You show who we can be and what we can do if we just put our minds and our great American genius to work." He said, "We've called on our kids to be number one in the world in math and science by the turn of the century and you are visible proof that we can do it."*

*President Bush also thanked the leaders of the Science Olympiad, Dr. Gerard Putz, John Cairns and Sharon Putz, for their vision and inspiration to the rest of the country. He said, "the Science Olympiad program shows us the way. It brings together 30,000 volunteers—teachers, parents, business people—each one working to strengthen excellence in his or her own community."*

*President Bush said, "I am tremendously impressed by all of the students, of course, all the teachers, and by the incredible scope of activities in which you participate" and that "we think of the scientists who, one day will discover the cure for cancer, find the formula to guarantee against AIDS, or use technology to wipe out hunger. And we realize that today that man or woman is a student in a science class somewhere. Maybe it's a kid who will catch a spark from this program—a spark that will change his life, her life, and in the process literally change the world. The Science Olympiad has that kind of power."*

*Dr. Gerard Putz, President of the Science Olympiad, presented the President with a Gold medal from the National Tournament and said, "President Bush, I want to thank you for recognizing the winning students and their coaches from last year's Science Olympiad finals. These students participated in rigorous competitive science, math and technology events which required not only knowledge and problem solving skills but also the ability to work together as a team. We agree with you that these students are visible proof that your America 2000 goal of being first in Science and Math in the world by the year two thousand can indeed be attained."*

# Auburn University

## College of Sciences & Mathematics

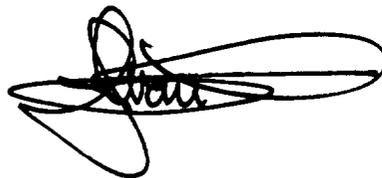
### Dean J. Ivan Legg



On behalf of Auburn University, NASA, and our corporate sponsors, I welcome you to the 1992 Science Olympiad National Tournament. I extend a special welcome to you, the student participants.

Your enthusiasm for science is key to our future. Many of you, indeed, will have a major impact on the future, not only of our nation, but of our planet. Through the understanding and application of science you will solve environmental problems, prevent disease, feed the hungry, establish new energy sources, develop new materials, and explore the far reaches of space.

You are challenged today, and you will be challenged tomorrow as you enter the 21st Century. Welcome the challenge of tomorrow with the enthusiasm of today's competition. If you do, we will all win. Good luck!



J. Ivan Legg  
Dean  
College of Sciences and Mathematics

## IN MEMORIAM



**Dr. William H. "Bill" Mason**  
**June 16, 1936 - November 25, 1990**

The 1992 Science Olympiad National Tournament is dedicated to William H. Mason, former Associate Dean of the College of Sciences and Mathematics at Auburn University. His love and support of students were legend. He brought the Olympiad to Auburn because of his commitment to the education of our children.



# Science Olympiad National Tournament

May 15-16, 1992

Auburn University, Auburn, Alabama

## Master Schedule of Olympiad Activities

### Friday, May 15, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Campus Activities Sign-up	Hotel and Conference Center	9:00 a.m. - 1:00 p.m.
Registration	Hotel and Conference Center	9:00 a.m. - 4:30 p.m.
Teacher Workshops	See Registration Packet	
Exhibits & Campus Activities	See Registration Packet	10:00 a.m. - 3:30 p.m.
NASA Special Event	Foy Union, Room 213	9:00 a.m. - 4:30 p.m.
Movies	Langdon Hall	9:00 a.m. - 4:45 p.m.
Lunch*	Terrell Dining Hall	11:00 a.m. - 1:30 p.m.
Reception for Officials	Hotel and Conference Center	4:00 p.m. - 6:00 p.m.
Dinner (all participants)†	Terrell Dining Hall	4:00 p.m. - 6:00 p.m.
<b>Opening Ceremony</b>		
Seating	Eaves Memorial Coliseum	6:00 p.m. - 6:30 p.m.
Ceremony	Eaves Memorial Coliseum	6:30 p.m. - 8:30 p.m.
Swap Meet	Terrell Dining Hall	8:30 p.m. - 10:00 p.m.
Ice Cream Social & DJ	Terrell Dining Hall	8:30 p.m. - 10:00 p.m.
Supervisor/Coaches Meeting	Hotel and Conference Center	9:00 p.m. - 10:00 p.m.

### Saturday, May 16, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Breakfast*	Terrell Dining Hall	6:30 a.m. - 9:30 a.m.
Impound Devices	At Event Site	8:00 a.m. - 8:30 a.m.
Science Olympiad Competition	Auburn University Campus	8:30 a.m. - 4:30 p.m.
Teacher Workshops	See Registration Packet	9:00 a.m. - 4:00 p.m.
Lunch*	Terrell Dining Hall	11:00 a.m. - 1:30 p.m.
Banquet	Foy Union Ball Room or Hotel and Conference Center	4:30 p.m. - 7:30 p.m.
<b>Awards Ceremony</b>		
Division B		
Seating	Eaves Memorial Coliseum	6:00 p.m. - 6:30 p.m.
Ceremony	Eaves Memorial Coliseum	6:30 p.m. - 7:45 p.m.
Division C		
Seating	Eaves Memorial Coliseum	8:00 p.m. - 8:30 p.m.
Ceremony	Eaves Memorial Coliseum	8:30 p.m. - 9:45 p.m.

### Sunday, May 17, 1992

<u>Event</u>	<u>Location</u>	<u>Time</u>
Brunch*	Terrell Dining Hall	10:30 a.m. - 1:30 p.m.
Officials' Rules Meeting	Hotel and Conference Center	7:30 a.m. - noon

\* See registration packet for information on meals.

† Dinner on Friday night will be provided by Auburn University.

## Science Olympiad Pledge:

I, \_\_\_\_\_,

pledge to put forth my best effort in the  
Science Olympiad and to uphold the principles  
of honest competition.

### What is the Science Olympiad?

**The Science Olympiad** is an academic interscholastic competition which increases student interest in and enthusiasm for science education.

**The Science Olympiad** is an opportunity for competitors to excel in 'science thinking' and 'science doing' either individually or as a member of a team.

**The Science Olympiad** provides a balance between knowledge of facts, concepts, processes, skills, and applications covering all areas of science.

**The Science Olympiad** has spread to more than 45 states nationally and expanded to an elementary division.

**The Science Olympiad** is challenging and fun.

*Enjoy the challenge and have fun  
today while you strive for excellence!*

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# Opening Ceremonies

## Eighth Annual Science Olympiad National Tournament Auburn University, Auburn, Alabama

**May 15, 1992**  
**Eaves Memorial Coliseum**

- 6:00 p.m. Seating in Eaves Memorial Coliseum  
Flag bearers assemble on ground floor of coliseum.
- 6:30 p.m. Presentation of the Colors  
Auburn University ROTC  
Roll Call of the States and Schools  
*Marllin Simon*, Auburn University  
The National Anthem  
Auburn University Singers  
Welcome  
*William V. Muse*, President, Auburn University  
*Gerard Putz*, Science Olympiad President  
*Jack Cairns*, Science Olympiad Vice President  
*J.A. Bethay*, Associate Director, Marshall Space Flight Center  
*Devona G. Williams*, DuPont  
Coaches Recognition  
Auburn University, Science Olympiad Board, &  
Glencoe/Macmillan/McGraw Hill  
Special Recognition Awards: *Sharon Putz*  
Laser Light Show by Stone Mountain Lasers  
Announcements  
Olympiad Pledge and Charge to Teams  
Retire the Colors
- 8:30 p.m. Swap Meet and Ice Cream Social, Terrell Dining Hall
- 9:00 p.m. Event Supervisors/Coaches Meeting  
AU Hotel and Conference Center

Dais:

Jack Cairns, Science Olympiad  
Gerard Putz, Science Olympiad  
Sharon Putz, Science Olympiad  
William V. Muse, Auburn University  
Ivan Legg, Auburn University  
Marllin Simon, Auburn University  
W.D. Perry, Auburn University

Devona G. Williams, DuPont  
Peter Morrow, DuPont  
Buzz Ellis, Glencoe/Macmillan/McGraw Hill  
Kathryn Carey, American Honda Foundation  
J.A. Bethay, NASA  
Jim Pruitt, NASA  
Ed Buckbee, U.S. Space and Rocket Center

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# Awards Ceremonies

## **Eighth Annual Science Olympiad National Tournament Auburn University, Auburn, Alabama**

**May 16, 1992**

### **Eaves Memorial Coliseum**

6:00 p.m.	Division B Seating in Eaves Memorial Coliseum
6:30 p.m.	Division B Awards Ceremony
8:00 p.m.	Division C Seating in Eaves Memorial Coliseum
8:30 p.m.	Division C Awards Ceremony

#### **Agenda:**

Presentation of the Colors  
Auburn University ROTC  
"America The Beautiful" performed by the Science Olympiad Orchestra.

Welcome and Introductions: *Marllin Simon,  
Ivan Legg, Gerard Putz and Jack Cairns*

#### Award Presentations:

Medals for events  
American Honda Foundation Scholarships

#### Special Awards:

U.S. Space and Rocket Center Scholarships  
American Watch Makers Institute  
American Geophysical Union  
National Earth Science Teachers Association

Plaques for 7th - 10th place teams

Trophies for 1st - 6th place teams

Farewell Remarks: *Gerard Putz & Ivan Legg*

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## **We Would Like to Express Special Thanks to...**

John Blackwell, Advancement Officer

Robin Hearn, Assistant Editor, University Relations

Ron Kriel, Safety Officer

Mr. George Murphy and Ms. Sherrie Morgan,  
Craftmaster Printers, Inc.

Ed People, Assistant Director of Food Services, and his staff

Robert Ritenbaugh, Director University Bookstore

Thomas Sparrow, Coliseum Director, and his staff

Stephen Swinson, Executive Director for Facilities Operations,  
and his staff

Without their help and cooperation, this event would not have been possible.

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# Schedule of Events

## Division B (Grades 6 - 9)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Cary Hall 137				Team # 1-25 CY 137		Team # 26-50 CY 137	
Astronomy: Part I Student Activities Bldg., Room 104			Team # 18-34 St. Act. 104	Team # 1-17 St. Act. 104	Team # 35-50 St. Act. 104		
Bio-Process Lab Cary Hall 217	Team # 26-50 CY 217	Team # 1-25 CY 217					
Don't Bug Me Funchess Hall 203				Team # 26-50 FS 203	Team # 1-25 FS 203		
Keep The Heat Cary 209			Team # 1-25 CY 209	Team # 26-50 CY 209			
Measurement Parker Hall 120/122	Team # 1-25 PKH 120/122	Team #26-50 PKH 120/122					
Metric Estimation Saunders Lab 324	Team # 1-25 SN 324	Team # 26-50 SN 324					
Picture This Haley Center 2326, 2330, 2332, 2334			Team # 13-24 HC 2326	Team # 38-50 HC 2326	Team # 1-12 HC 2326	Team # 25-37 HC 2326	
Road Rally Haley Center 2406					Team # 26-50 HC 2406	Team # 1-25 HC 2406	
Rocks, Minerals and Fossils Haley Center 2174/2169		Team #26-50 HC 2174/2169	Team # 1-25 HC 2174/2169				
Science Bowl Haley Center 2470	Team # 1-18 HC 2370	Team # 19-36 HC 2370	Team # 37-50 HC 2370				Semi-Finals & Finals
Science Crime Busters Saunders Lab 212	Team # 26-50 SN 212	Team # 1-25 SN 212					
Simple Machines Parker Hall 104/108	Team # 18-34 PKH 104/108	Team # 1-17 PKH 104/108	Team # 35-50 PKH 104/108				
Sounds of Music Goodwin Music Hall 227, 228/229	Team # 27-34 GB 227	Team # 10-18 GB 227	Team # 43-50 GB 227	Team # 19-26 GB 227	Team # 35-42 GB 227	Team # 1-9 GB 227	
Weather or Not Chemistry Building 134				Team # 1-25 CB 134	Team # 26-50 CB 134		
Write It/Do It Saunders Lab 300/306					Team # 1-25 SN 300/306	Team # 26-50 SN 300/306	

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Aerodynamics Aloft Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Astronomy: Part II Student Activities Building	All Teams Student Activities Building						
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Egg Drop Haley Center - Stair Well East Side	All Teams Haley Center - Stair Well East Side						
Get Your Bearings South End of Duncan Drive	All Teams Wooded Area at South End of Duncan Drive						
Mousetrap Vehicles Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, East Concourse						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Trajectory Contest St. Act. Building, Main Floor	All Teams Student Activities Building (Main Gym Floor, Room 103)						

SPECIAL EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab, Room 314	All Teams Saunders Lab, Room 314						



# Schedule of Events

## Division C (Grades 9-12)

SCHEDULED EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
A is for Anatomy Gary Hall 201	Team # 1-25 CY 201	Team # 26-50 CY 201					
Balancing Equations Chemistry Building 151			All Teams CB 151				
Bio-Process Lab Gary Hall 217					Team # 1-25 CY 217	Team # 26-50 CY 217	
Cell Biology Funchess Hall 208				Team # 18-34 FS 208	Team # 1-17 FS 208	Team # 35-50 FS 208	
Chemistry Lab Saunders Lab 224	Team # 1-17 SN 224	Team # 18-34 SN 224	Team # 35-50 SN 224				
Circuit Lab Parker Hall 114/118		Team # 35-50 PKH 114/118	Team # 18-34 PKH 114/118	Team # 1-17 PKH 114/118			
Computer Programming Tichenor Hall 203		Team # 1-25 TR 203	Team # 26-50 TR 203				
Designer Genes Gary Hall 136				All Teams CY 136			
Don't Bug Me Funchess Hall 203	Team # 26-50 FS 203	Team # 1-25 FS 203					
It's About Time Saunders Lab 212				Team # 26-50 SN 212		Team # 1-25 SN 212	
Measurement Parker Hall 120/122					Team # 26-50 PKH 120/122	Team # 1-25 PKH 120/122	
Metric Estimation Saunders Lab 324				Team # 1-25 SN 324	Team # 26-50 SN 324		
Physics Lab Parker Hall 100/102			Team # 35-50 PKH 100/102	Team # 1-17 PKH 100/102	Team # 18-34 PKH 100/102		
Qualitative Analysis Saunders Lab 216	Team # 26-50 SN 216		Team # 1-25 SN 216				
Road Rally Haley Center 2406	Team # 1-25 HC 2406		Team # 26-50 HC 2406				
Rocks, Minerals & Fossils Haley Center 2174/2169					Team # 1-25 HC 2174/2169	Team # 26-50 HC 2174/2169	
Science Bowl Haley Center 2370				Team # 19-36 HC 2370	Team # 37-50 HC 2370	Team # 1-18 HC 2370	Semi-Finals & Finals
Sounds of Music Goodwin Music Hall 102/105/134	Team # 43-50 GB 102	Team # 10-18 GB 102	Team # 1-9 GB 102	Team # 35-42 GB 102	Team # 19-26 GB 102	Team # 27-34 GB 102	
Write It/Do It Saunders Lab 300/306	Team # 1-25 SN 300/306	Team # 26-50 SN 300/306					

WALK-IN EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Bridge Building Student Activities Building	All Teams Student Activities Building (Main Gym Floor, Room 103)						
Get Your Bearings South End of Duncan Drive	All Teams Wooded Area at South End of Duncan Drive						
Pentathlon Lawn in Front of Allison Lab	All Teams Lawn in Front of Allison Lab						
Scrambler Eaves Memorial Coliseum	All Teams Eaves Memorial Coliseum, West Concourse						

SPECIAL/DEMO EVENTS	8:30-9:30	9:40-10:40	10:50-11:50	12:00-1:00	1:10-2:10	2:20-3:20	3:30-4:30
Mission to Planet Earth Foy Union, Room 213	All Teams Foy Union, Room 213						
Water Quality Demo Event Saunders Lab, Room 314	All Teams Saunders Lab, Room 314						



# Division B

## Science Olympiad National Tournament

Team #	State	School	Head Coach
1 B	WI	Morse Middle School	Al Stawicki
2 B	NY	North Syracuse Junior High	Rita Kubert
3 B	NE	Irving Junior High	Peg Connealy
4 B	OH	Kimpton Middle School	Ron Eting
5 B	DE	Hanby/Concord	Lyn Newsom
6 B	DE	Henry B. duPont Middle School	Thomas Hounsell
7 B	OR	Whitford Intermediate	Richard Duncan
8 B	LA	E. A. Martin Middle School	Juanita Guerin
9 B	WA	Frontier Junior High	Chris Koester
10 B	ME	Jay Jr. High School	Ray Chase
11 B	CO	Dunstan Middle School	Bruce Hogue
12 B	MO	Plattsburg Jr. High	Lynda Rosander
13 B	CA	Bell Junior High School	James Ballantine
14 B	IL	Hill Middle School	Peggy McCall
15 B	KY	Bell County Middle School	Chuck Blank
16 B	TX	Westview Middle School	Jesus T. Garcia
17 B	CA	Winston Churchill Middle School	Bob Wofford
18 B	GA	Booth Middle School	Mary Wilde
19 B	WI	Wilson Jr. High School	Gary Krueger
20 B	TN	Bearden Middle School	Brenda Miller
21 B	VA	Elydale Elementary	John Janeway
22 B	MT	Big Timber / Sweet Grass County	Rolland Karlin
23 B	IL	South Jr. High	Katie Kaufman
24 B	NM	San Miguel School	Mary Nutt
25 B	AZ	Utterback Middle School	John Rhodes
26 B	SC	Irmo Middle School - Campus R	Wendy Morris
27 B	IN	Thomas Jefferson Middle School	Richard Bender
28 B	NY	Weber Jr. High School	Don Fish
29 B	PA	Peirce Middle School	Charlotte Knighton
30 B	MID	Bennett Middle School	Penny Caldwell
31 B	MO	Excelsior Springs	Barbara Armstrong
32 B	AL	Auburn Jr. High	Michael Patrick
33 B	MN	Twin Bluff Middle School	Jim Bergeson
34 B	MI	Slauson Middle School	Jeffrey Bradley
35 B	NC	Liberty Junior High	Janet McDaniel
36 B	SD	Yankton Middle School	Tom Merrill
37 B	PA	Stroudsburg Middle School	Mrs. Robison
38 B	CO	Woodland Park Middle School	Christa Lundberg
39 B	ND	Valley City Jr. High	Dennis Friestad
40 B	KS	St. Thomas Aquinas	Mary Beth Castleberry
41 B	UT	S. Ogden Jr. High	Holly Barker
42 B	OH	Bennett Jr. High	Vickie Miller
43 B	GA	White Water Middle School	Julie Prather
44 B	MI	Jenison Jr. High	Annette Dobrzynski
45 B	FL	McNair Magnet School	Jana Gadielski
46 B	WY	McCormick Jr. High	Steve Siegel
47 B	RI	Lincoln Junior High	Michelle Bailey
48 B	NC	Our Lady of Lourdes School	Mary Jane Davis



## Division C

# Science Olympiad National Tournament

Team #	State	School	Head Coach
1 C	RI	Classical High School	Michael Specht
2 C	SD	Yankton High School	Robert Medeck
3 C	OH	Kettering Fairmont H.S.	Maggie Martin
4 C	WA	Joel E. Ferris High School	Cinda Parton
5 C	ME	Oxford Hills High School	Jeff Cook
6 C	NE	Lincoln Southeast High School	Jake Winemiller
7 C	WY	Green River High School	Alex Katchuk
8 C	IL	Illinois Mathematics & Science Academy	Robert Hattaway
9 C	DE	Alexis I. duPont High School	Jillann Hounsell
10 C	TX	Langham Creek High School	Sam Saenz
11 C	NM	Albuquerque Academy	Tom Bucannon
12 C	KS	Wichita High School North	Janice Crowley
13 C	GA	Stone Mountain High School	K.C. Nainan
14 C	NC	NC School of Science & Math	John Kolena
15 C	OR	Beaverton High School	Dean Smith
16 C	AL	Muscle Shoals High School	Teena Noles
17 C	SC	Irmo High School	Glenda George
18 C	MS	Northeast Lauderdale High	Peggy Clayton
19 C	NY	Maine-Endwell High School	Warren Gulden
20 C	NC	Chapel Hill High School	Carolyn Morse
21 C	GA	Newnan High School	Beverly Lang
22 C	VT	Morgan High School	Mark Nethercolt
23 C	MT	Bozeman High School	Lisa Rogers
24 C	VA	Thomas Walker High School	Bruce Hendrickson
25 C	CA	Rio Americano High School	Nancy Smith
26 C	LA	C.E. Byrd High School	Hal Meekins
27 C	IN	Gavit High School	Laurel Krol
28 C	CA	La Jolla High School	Shauna Neubauer
29 C	AL	Lanier High School	Jennie McConnell
30 C	NY	Cicero-North Syracuse High	Barry Crossman
31 C	MA	Cambridge Rindge and Latin School	Kate Dollard
32 C	WI	Madison West High School	Van Valaskey
33 C	CO	George Washington High School	Lloyd Hendricks
34 C	FL	Bloomington Senior High	Marian Marley
35 C	MO	Ladue Horton Watkins High	Tony Kardis
36 C	MI	Forest Hills Central High	Suzanne West
37 C	OH	Centerville High School	Marcia Akridge
38 C	IN	North Central High School	Katie Vitolins
39 C	TN	Franklin High School	Karen Mauldin
40 C	MN	Apple Valley High School	Neil Michels
41 C	MI	Grand Haven Senior High	Lane Smith
42 C	MO	Pembroke Hill School	Connie Wells
43 C	ND	Fargo South Dakota High	Steve Kennedy
44 C	DE	St. Mark's High School	Dennis Swartzfager
45 C	PA	Havenford High School	Roger Demos
46 C	KY	Hopkinsville High School	James Chiles
47 C	PA	Stroudsburg High School	Tara Devivo
48 C	AZ	University High School	Bob Thomas



## Event Supervisors

Event	Name	Affiliation	State
A for Anatomy	Jim Dobie	Auburn University	AL
	Dorothy Hickman	Laurel High School	DE
Aerodynamics Aloft	Frank Uhlig	Auburn University	AL
	Dale Reynard	Wilmington Friends School	DE
	Paul Otto	University of South Dakota	SD
Astronomy	J.M. Wersinger	Auburn University	AL
	James A. Smith	StarLab Dealer	GA
Balancing Equations	Curt Ward	Auburn University	AL
	Mary O'Conner	Caesar Rodney High School	DE
Bio-Process Lab	Arthur Appel	Auburn University	AL
Bridge Building	Michel Smith	Auburn University	AL
	Mike Ruby	Rockwood S. JHS	MO
	Dick/Shirley Prouty	Everett Comm. College	WA
Cell Biology	Narendra Singh	Auburn University	AL
	Harry Dillner	Christiana High School	DE
Chemistry Lab	Tom Webb	Auburn University	AL
Circuit Lab	Mike Bozack	Auburn University	AL
	Dave Stover	St. Marks High School	DE
Computer Prog.	Stewart Baldwin	Auburn University	AL
Designer Genes	Marie Wooten	Auburn University	AL
	George Renwick	Newberry College	SC
	John Carleton	St. Marks High School	DE
Don't Bug Me	Debbie Folkerts	Auburn University	AL
	Michael Mack	Clinton High School	SC
Egg Drop	Gregg Harris	Auburn University	AL
E.V.E.	Eddie Hand	ADECA	AL
Get Your Bearings	Bert Salcedo	Auburn University	AL
It's About Time	Herman Pat Goeters	Auburn University	AL
	Jerry Fair	Clock Maker	KS
	Joe Moulder	Lee High School	MI
Keep the Heat	Curt Peterson	Auburn University	AL
	Allan Jacobs	Trinity Lutheran	MI
Measurement	Charlotte Ward	Auburn University	AL
	John Reiher	New Castle Voctech	DE
Metric Estimation	Peter Nylan	Auburn University	AL
	Harold Miller	NY State Director	NY
Mission to Planet Earth	John Katzenberger	Aspen Global Change Inst.	CO
	Jessie Boyce	Aspen Global Change Inst.	CO
Mousetrap Vehicles	Jo W. Heath	Auburn University	AL
	Bob Griffy	Chute MS	IL



## Event Supervisors

Event	Name	Affiliation	State
Pentathlon	Bill Baird	Auburn University	AL
	Karen Lechner	Kent County Orth. School	DE
Physics Lab	Jim Hanson	Auburn University	AL
	George Kalligeros	Mt. Clemens High School	MI
Picture This	Judy Prior	Auburn University	AL
Qualitative Analysis	Curt Shannon	Auburn University	AL
	Karen Schloegl	Buffalo Grove H.S.	IL
Road Rally	Mark Steltenpohl	Auburn University	AL
	Bob Campbell	Snohomish County Public Works	WA
Rocks, Minerals & Fossils	Tracy Tatum	Auburn University	AL
Science Bowl	Bill Dorgan	Auburn University	AL
	John Yanaitis	Wm. Penn High School	DE
Science Crime Busters	Jimmy Mills	Auburn University	AL
	Marge Christoph	St. Marks High School	DE
Scrambler	Michel Smith	Auburn University	AL
	Br. Tim Paul	St. John's Prep.	MA
Simple Machines	Rex Gandy	Auburn University	AL
	Charles Gosselin	Penn Valley C.C.	MO
Sounds of Music	Randall Faust	Auburn University	AL
	Kathy Melvin	Polytech H.S.	DE
	Gene Carlisle	Delaware Science Oly.	DE
Trajectory Contest	John Williams	Auburn University	AL
	Robbie Adams	C.R. High School	DE
	Vanetta Perry	New Mexico Tech	NM
Water Quality	Bill Hall	University of Delaware	DE
	Donna Sefton	U.S. EPA, Region 7	KS
Weather or Not	Steve Knowlton	Auburn University	AL
Write it/Do it	Jim Armstrong	Auburn University	AL
	Sandra Wolford	Wallace Wallin School	DE
	Melinda Thornton	Laurel MS	DE
Arbitration	Dick Smith	PA Science Olympiad	PA
	Sue Zamzow	PA Science Olympiad	PA
Score Keeping	Burt Basney	Warren Cons. Schools	MI
	Carol Basney	Warren Cons. Schools	MI
	Lynne Dewey	Michigan Science Oly.	MI
	Vicki Boyd	Lake Forest High School	DE
	Jim Stagliano	Auburn University	AL
	W.D. Perry	Auburn University	AL



## Notes





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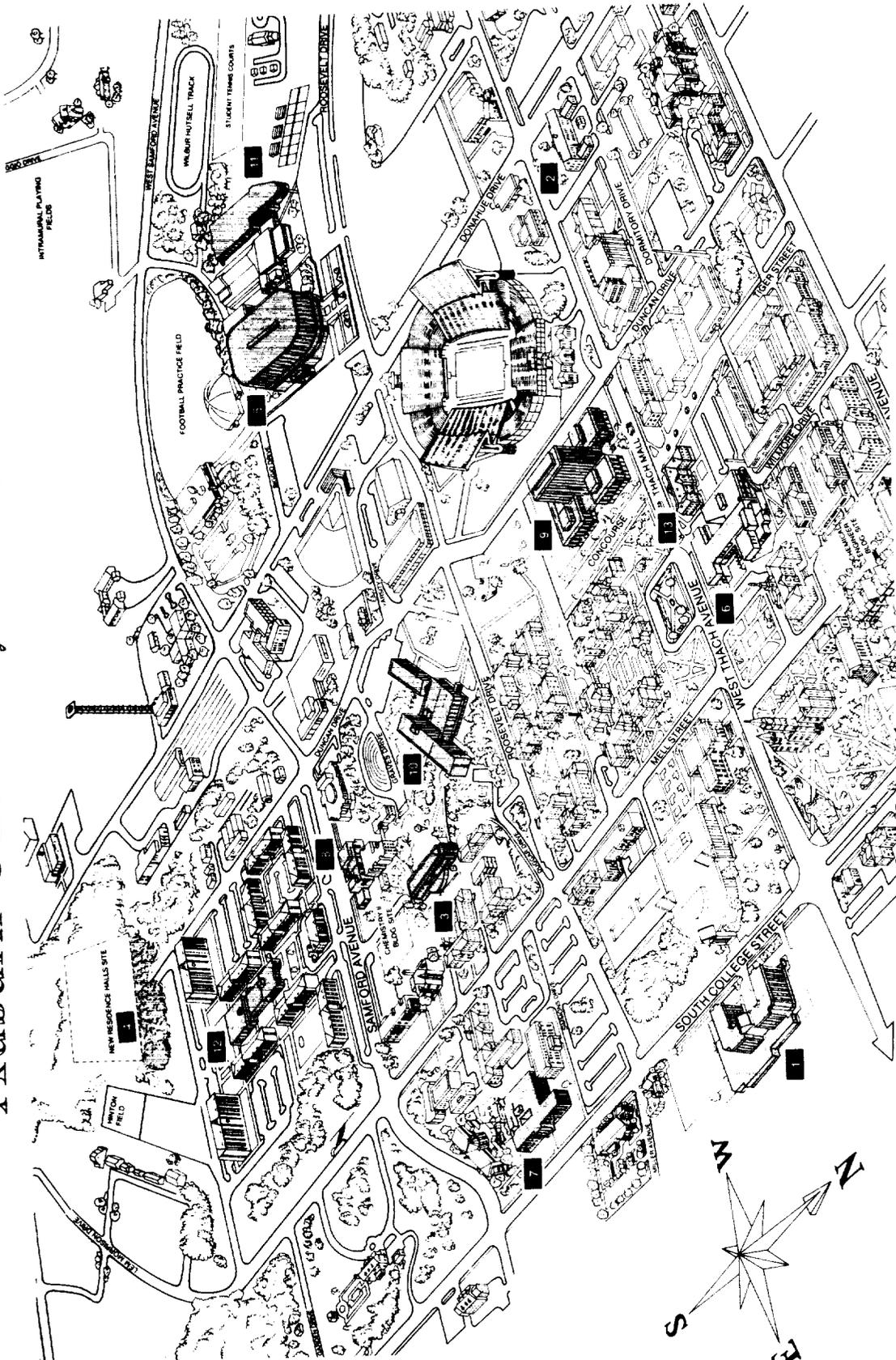
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# Auburn University Campus Map



- 1. AU Hotel & Conference Center
- 2. Cary Hall, Biology
- 3. Chemistry Bldg.
- 4. Duncan Woods
- 5. Eaves Memorial Coliseum
- 6. Foy Union
- 7. Funchess, Agriculture
- 8. Goodwin Hall, Music
- 9. Haley Center
- 10. Saunders, Parker, Allison
- 11. Student Activ. Ctr.
- 12. Terrell Dining Hall
- 13. Tichenor Hall, Business